DE BOW'S REVIEW:

ESTABLISHED JANUARY, 1846.

O. S. VOL. XVIII.] FEBRUARY, 1855. [N. S. VOL. I., NO. II.

Literary and Miscellaneous.

THE SOUTH AND THE UNION.

Three or four years ago, when the compromise measures were under discussion and public excitement run very high, a pamphlet was prepared by Mr. Garnett, of Virginia, entitled "The Union, Past and Present, How it Works and How to Save it." When this exposition upon the part of the south made its appearance, it was assailed on the stump and by the press in one part of the country quite as much as it was quoted, circulated, and lauded in another. The attack and the defence entered even the halls of Congress.

As it has ever been the object of the Review to preserve in its pages documents of this character, and as all the papers of Harper and Hammond, O'Neill, Dew, Fisher, &c., have been regularly embodied, Mr. Garnett's pamphlet came in naturally for a place. The settlement of the question, however, and the presence of other exciting and interesting topics relating to the industrial advancement of the south, diverted us for the time, and have to this day interfered with its appearance. Our memory is now refreshed by the publication at the north of an elaborate review of the pamphlet, couched in language of severest criticism, and also by the receipt of many letters asking for a copy of it, though believed to be nearly if not entirely out of print.

Now that so many of the old issues are being re-opened, and the south is being made to realize in all its fullness, by the course of the enemies of her institutions, that the north,

——"Convinced against its will,
Is of the same opinion still,"

the publication will not be ill timed. It will, therefore, appear in this and the following numbers of the Review, together with the criticism to which reference has been made. The south has nothing to apprehend from discussion. She is willing to hear and to circulate both sides of every question.

PART I.

HISTORY OF THE SLAVE AGITATION—SURRENDER OF FUGITIVE SLAVES—THE MISSOURI COMPROMISE—INCENDIARY PUBLICATIONS—ACTION IN CONGRESS.

The time has come when it behooves every southern man to consider the best means of preserving the Union which he loves, and the rights and honor which are yet dearer. Sixty years have passed since the northern and southern States entered into a treaty for "the common defence and general welfare." We joined that league as equals; its strictly defined powers were to be exercised for the equal good of all the parties, and its benefits and burdens were to be equally shared. But our allies at the north have grown strong under the fostering protection of this great treaty, and are no longer content with the equal conditions upon which it was formed. They

have perverted it from its original character, not only wielding the granted powers for sectional and oppressive purposes, but assuming every doubtful power for their exclusive advantage. In this spirit they have advanced far in a series of measures which, if unresisted, must end in the overthrow of our slave institutions. But it cannot be doubted that a free people, still untamed by the yoke of oppression and the stamp of inferiority, will resist such assaults. The south has at stake, not merely the fourteen hundred millions of dollars, the value of her slave property, but all of honor and of happiness that civilization and society can give. To count the means of resistance, the relative strength of the opponents, the value of what we must hazard, and the surest ways of preserving the Union in its original equality, is the object of this essay.

The history of the causes of the present crisis is the history of ever-growing demands on the part of the north, and of as constant concessions from the south. A hasty glance at the past will aid us to divine the future.

Virginia owned an immense territory to the northwest of the Ohio river, acquired by the same titles with the soil of the Old Dominion itself—the royal grants, her treasure, and her blood. More than one of her ancient colonial charters covered this whole domain, and in 1778, at her own expense, she fitted out an expedition for its conquest. Her gallant son, George Rogers Clarke, at the head of a small but daring band, penetrated hundreds of miles through a savage and hostile country, expelled the English, subdued the Indians, and conquered for his mother State an empire larger than the Austrian. For the sake of the Union, Virginia gave up this fine country, larger than all the southern States of the Old Thirteen, and by "an act of grosser fatuity," as Randolph said, "than ever poor old Lear or the Knight of La Mancha was guilty of," she suffered her own citizens to be excluded from its benefit; for it was then a slaveholding territory, and the ordinance of 1787, abolishing slavery there, was passed chiefly by northern votes, and that, as Mr. Madison said, "without the shadow of constitutional authority." It was a country well suited for slavery, for even so late as 1806 we find a convention of the inhabitants of Indiana petitioning for its temporary introduction, and a committee of the House of Representatives reporting through their chairman, Mr. Garnett, of Virginia, in favor of their prayer. But while Virginia was guilty of this suicidal generosity, she annexed one condition for her own advantage, that not more than five States should be formed out of this territory, so as to preserve a due balance of political power

in the Union. Yet even this condition the north has violated, and 22,336 square miles of its area, more than the average size of all the free States east of the Ohio, have gone to constitute the future State of Minnesota.

This was the first step, and the next was at the formation of the present Constitution, when a contest arose as to the ratio of representation. Should the south have as many representatives in proportion to her population as the north? It was just and right that she should. The federal government had no concern with the relations between blacks and whites, the different classes of her population. It had no right to inquire whether the negro was a slave or free. The slaves were a better population than the free negroes, and if the latter were to be counted at their full number in the apportionment of representation, so ought the former. The right could not be refused, because the slaves were naturally or legally unequal to the whites, for so are the free negroes. It could not be refused, because they have no political rights, for neither have free negroes, paupers, women, or children. They are an essential part of the population; if absent, their places must be filled by other laborers, and if they are property as well as population, it is an additional reason for giving their owners the security of full representation for them. But the south, as usual, yielded to northern exorbitance, and agreed that five slaves should count only as three free negroes. Therefore, instead of one hundred and five representatives in Congress, we have only ninety-one.

But the free States are not content with this, and now propose to take away twenty-one more of our representatives. They say that the right of representation for three-fifths of our slave population is a sufficient reason for refusing admission into the Union to any new slave State; and Massachusetts has proposed, by a solemn legislative resolution, to amend the Constitution so as to deprive us of this guarantied representation. Public meetings and eminent men have approved of her proposal.

In return for this surrender of her rights, the south inserted into the Constitution two stipulations in her own favor. The first provided that direct taxes should be apportioned amongst the States in the ratio of their representation. According to this provision, we ought now to pay a little more than one-third of the taxes; we actually pay under the present system over three-fourths. The amount levied from customs since the foundation of the government has been about 1,047 millions of dollars; and had these duties been paid in the ratio which

the Constitution indicates as just and proper, the south would have paid 442, and the north 605. But, as we shall see hereafter, the slave States have really paid 798 millions, and the free States only 249. Therefore, the south has gained nothing by this stipulation in return for her loss of representation.

The other stipulation in favor of the south was, that "no person held to service or labor in one State, under the laws thereof, escaping into another, shall, in consequence of any law or regulation therein, be discharged from such service or labor, but shall be delivered up on claim of the party to whom such service or labor may be due." This provision rests for its due fulfilment, not merely upon the federal government, but, like a treaty stipulation between distinct nations, must be carried into effect by the municipal regulations of the parties, and their comity and good feeling. Yet, what has it been worth to the south? So far from executing this clause, and "delivering up" the runaway slaves, the free States refuse to pass any efficient law to that end in Congress, and such is their state of feeling, and such their domestic laws, that any federal law, even if enacted, could not be executed. In their own governments, they make it a criminal offence, punishable by fine and imprisonment, for any officer, and in some States for any *citizen*, to assist in seizing or "delivering up" a fugitive slave. Their whites and their free negroes assemble in mobs to rescue the slave from the master who is bold enough to capture him, and then accusing him of the riot they made themselves, throw him into a felon's jail and load him with fetters, as Pennsylvania has recently done by a respectable citizen of Maryland. When Troutman, of Kentucky, pursued his slaves into the town of Marshall, in Michigan, he was surrounded by a mob, led by the most influential citizens, who declared that "*though the law was in his favor*, yet public sentiment must and should supersede it," and a resolution was tumultuously adopted, that "these Kentuckians shall not remove from this place these slaves, by moral, physical, or *legal* force." A *magistrate* fined Troutman $100 for the *trespass* in attempting to arrest his slaves; and he was recognised to appear at the next circuit court for drawing a pistol on a *negro* who was forcing the door of his room! But this was mild treatment compared with the fate of the lamented Kennedy, of Hagerstown. When he followed his slave into Carlisle, Pennsylvania, and was peaceably, and with his own consent, bringing him away, an infuriated mob of whites and free blacks, incited by the professor of a college, assaulted

and brutally murdered him! It is estimated by Mr. Clingman, that the whole loss to the south in fugitive slaves is not less than fifteen millions of dollars. Mr. Butler, of the Senate, estimated the annual loss to the south at $200,000, and more recent statements make it probable that he was under the true amount. The philanthropy of the north does not extend to voluntary free negro emigrants from the south, but is confined to the runaway slaves, whom it can force by fear to work at immoderately low wages.*

So much for the value of the second stipulation, which the slave States accepted as an equivalent for their loss of representation. After the adoption of the Constitution, there was a considerable pause in northern encroachments. There were still a few slaves in all the free States, except Massachusetts; and many of their citizens were deeply and openly interested in the slave trade until 1808, when it was made piracy. It was notorious that James D'Wolff, who represented Rhode Island in the Senate of the United States from 1821 to 1825, made an immense fortune by this traffic. The Brazil and Cuba markets (as may be seen proved in the Wise correspondence) are still largely supplied with captive Africans by Yankee vessels; but this is now a *foreign and secret* interest. The north was not ready for a renewed attack until the approach of the fourth census in 1820. Under the process of abolition and sales to the south, her slaves had diminished from over 40,000 in 1790, to about 9,000, and these were virtually free. Her strength in Congress had increased at the same time. In 1790, the south had as many votes in the Senate, and only eight less in the House. In 1817, the north had a majority of two in the former body, and twenty-five in the latter. It was accordingly on the application of Missouri in 1819-'20 for admission into the Union, that the pretension was first set up that no new slave State should enter the confederacy. A clause prohibiting slavery was inserted into the bill for the admission of Missouri, when it became apparent that her people would reject such a bill, if passed, and, with a government regularly organized according to all the constitutional precedents, would remain without the Union as a separate, independent State, unless the federal authority undertook to subdue her, and convulse the country by a civil war. In this state of the question, the south had only to re-

* The reader will call to mind subsequent violations of the Constitution and laws in this matter of fugitive slaves. For an able statement of what the south has lost in such slaves, he will consult a paper embodied in the editor's "Industrial Resources of the South and West." The census of 1850 returned 1,011 fugitive slaves of all classes.

main firm, and the north would be forced to yield; but, as usual, the south was weak enough to retreat from her ground, and in her love for the Union she submitted to a provision forever prohibiting slavery in all that part of the Territory of Louisiana (except Missouri itself) which lies north of 36° 30′, the *southern boundary* of Virginia and Kentucky. The south thus lost, without any equivalent, nine-tenths of what was already a slave territory, purchased by the common treasure. She retained only 110,000 square miles for the emigration of her own citizens, and surrendered 965,000 to the north.

Yet even this so called compromise, forced upon us by northern votes, is now spurned by the free States. They have derived all the possible benefit from it on this side of the Rocky Mountains, and they refuse us the poor advantage, which it would secure, of 204,383 square miles out of 867,541 on the other side!

From this time, the northern ascendancy was confirmed, if not in the present, yet in the future distribution of political power, which would result from her overwhelming superiority in territory. The abolition societies sprung up with new vigor, and the halls of Congress were made the field of incendiary agitation. Fanaticism, both in and out of Congress, denied that slaves were property, and in the debate on the Marigny D'Auterive case, claims for compensation for their loss in the public service were opposed on this ground. The whole country was pervaded by "a politico-religious fanaticism," which, in the language of Randolph of Roanoke, "has insinuated itself wherever it can to the disturbance of the public peace, the loosening of the keystone of the Constitution, and the undermining of the foundation on which the arch of our Union rests." Demagogues of either party bid for the votes of these fanatics by assaults upon southern rights, and the anti-slavery feeling, thus stimulated, has spread through the masses, and grown too strong to be controlled. Hear again the prophetic wisdom of the Virginia orator, uttered twenty-five years since, on this very subject: "Men commence with the control of things—they puts events in motion, but after a very little while events hurry them away, and they are borne along with a swift fatality that no human sagacity or power can foresee or control." So has it been with this anti-slavery movement. Its leaders then assured us that no harm was intended, and our rights would never be invaded. Mr. Burges, of Rhode Island, one of the most distinguished northern men of his day, said, after an elaborate argument to show the south how little she had to fear: "From neither of these classes, therefore

have southern men anything to apprehend, or to produce excitement. The enthusiasts will not disturb them, for they have not the power to do it. The philanthropists will not do it, for *they will not, for any supposed good, violate even the legal rights of others.* From the politicians they have nothing to apprehend, because they will not only not break the laws of their country for any purpose whatever, or better the condition of any man against his own will, but because they will not diminish the political weight and influence of themselves and their own States for any purpose of augmenting that of other men or other States." [Mr. B. affected to believe that the prosperity and consequent political power of a slave State would always be inferior to that of a free State.] "No, be ye assured throughout all the regions, the philanthropists will never *unjustly relieve the slave from the master; the politician will never illegally relieve the master from the slave.*"—(Cong. Deb., vol. IV., 1096.) Mr. Robbins, Mr. Briggs, and other eminent men, held similar language. Mr. Holmes, of Maine, a Senator, went so far as to declare that the refusal to deliver up fugitive slaves was virtual emancipation, and to suppose such a refusal on the part of Pennsylvania as an *extreme case*, to illustrate his argument! This last was as late as 1833. What an advance since then! Yet these assurances were about as true as those now made, that slavery shall not be touched within the States—that the town shall not be entered when all the walls are captured. The south, however, confided in them, and remained quiet; and presuming on this, the war was waged with ever-growing zeal. In vain did Randolph cry to the south, "*principiis obsta*"—in vain did his shrill Cassandra tones point out the nature of the attack, that the enemy was proceeding, "not to storm the fort, but to sap;" that we ought to remember the sentiment, "*non vi sed sæpe cædendo,*" and "permit no attack to pass, no matter in how demure and apparently trivial an aspect it may be presented." The south would heed no warning. When the flood of abolition petitions began first to pour in on Congress, they were received and referred to appropriate committees, as the members presenting them might move, and duly reported on. This course only encouraged the movement, until the south was at last roused into a refusal to receive petitions so insulting, and which prayed for such gross violations of her consitutional rights. But it was said that this refusal afforded a pretext for fanatical agitation, and that all would be quiet if the old plan was restored. The House of Representatives, therefore, repealed the rule against the reception of such petitions, and what has been the result?

There can be but one answer—an ever-growing agitation, for fanaticism and unlawful violence feed and wax strong upon concession.

Meantime organized societies at the north were forging county seals and free papers to aid the slaves whom they seduced to escape, and inciting mobs to murder the owners who dared to recapture them. They distributed papers through the mails and by their agents, and spared no effort to kindle an insurrection among our slaves. They dared not have attempted such outrages upon Cuba or Brazil. Between separate nations they would be cause of war, and the offenders would have been treated as felons, if arrested. The offence was too notorious to be denied, and Gov. Marcy, in his message to the New York legislature, in 1836, acknowledged it to be one of "the sacred obligations which the States owe to each other, as members of the federal Union," "to punish residents within their limits guilty of acts therein which are calculated and intended to excite insurrection and rebellion in a sister State." Yet so callous has the south grown to her wrongs by use, or so far have later injuries surpassed it, that she ceases to remember this flagrant and still subsisting violation of the spirit and intent of our Union!

It is now proposed to exclude the south from the Territory of California and New Mexico, 446,638 square miles, large enough to make more than eleven States equal to Ohio. The south paid her share, and, as we shall see, far more than her full share, of the expense of the Mexican war. Of the gallant volunteers who fought its battles, she furnished 45,640, and the north 20,084—but little more than half as many. The south sent one man out of every twenty-six of military age—the north only one out of every one hundred and twenty-four. How those battles were fought and won, of which section the generals were natives, whose regiments faltered, and whose left two of their men stretched upon the bloody field, while the third planted the stars and stripes upon the Mexican battlements, the south will leave to history to say. And now it is proposed to exclude the survivors and their fellow-citizens from the equal enjoyment of the conquests of the war! And why?—because, as the Vermont resolutions declare, "*slavery is a crime against humanity!*"

The north next proposes to abolish slavery in the District of Columbia, and so make a harbor for runaways, and a centre of abolition agitation in the very heart of Virginia and Maryland. This is to be done in defiance alike of good faith and of constitutional obligation; and why?—because, as the

Gott resolution, passed by the House of Representatives, declares "*slavery is infamous!*"

The northern vote in Congress on these questions is almost unanimous, without distinction of parties, against the south. The exceptions are daily fewer, swept away by the overpowering tide of fanatical public sentiment at the north. The State legislatures are equally agreed. They have all, and the majority more than once, adopted resolutions of the most offensive character. The next threat is to abolish slavery in the dock yards, forts, and arsenals, for there Congress has the same jurisdiction and responsibility as in the District. It is asserted that slavery cannot exist without a special law to establish it in the new Territories, because property in negroes is, as they pretend, a creation of municipal regulation alone, and therefore ceases beyond the limits of the State which authorizes it. Not only does this argument fail in its major proposition, for there is no law establishing slavery in any State where it exists, but it fails also in its application, for the limits and authority of each slave State *do* extend to the new territory held by the common federal agent. But, if true, by parity of reasoning, slavery cannot exist on the high seas, and so say our abolitionists. Therefore, the slaves who leave Richmond on a voyage to New Orleans are free as soon as the vessel leaves the shore. The prohibition of what they call the slave trade on the high seas, and then on the Mississippi, whose waters they pretend are common property, and then between the States, will quickly follow each other. What would be left the south in such a condition? With asylums for runaways and stations for abolition agents in every State, the mail converted into a colporteur of incendiary tracts, forbid to carry our slaves from State to State, unable to emigrate to new and more fertile lands, and thus renovate our fortunes and give our sons a new theatre for their energies, without sacrificing all our habits, associations, and property; and yet with all this, bound to pay taxes and fight battles for conquests, we are to have no share in and for a government known to us only by its tyranny, how miserable would be our thraldom! Can any southern man bear the idea of such degradation? He might endure the loss of his rich conquests in California, but can he bear to be excluded because his institutions are infamous? because he is branded with inferiority, and under the ban of the civilized world? If he can, then is he worthy of all, and more than all, that is threatened him.

But abolition will not stop, even when slavery is thus hemmed in, "localized and discouraged," as Senator CHASE pro-

poses. Anti-slavery sentiment is to be made the indispensable condition of appointment to federal office; and by thus bribing southern men to treachery, the war is to be carried on to the last fell deed of all—the abolition of slavery within the States—for, to quote Randolph once more, "Fanaticism, political or religious, has no stopping place, short of Heaven, or—of Hell!"

THE AMERICAN STATES—ALABAMA.*

There is certainly among our people a strange lack in appreciating the invaluable benefit of that severe mental discipline and introduction to knowledge which a college curriculum affords. Is it that we underrate thorough education? Is it that an acquaintance with the sciences is deemed superfluous; those sciences which have made the nineteenth century unparalleled in history for mighty strides in the cause of humanity, which now command the intense interest of the world, and whose applications enter into the practical operations of every-day life? Or is it rather that undue prominence is given to classical research? The experience of the past testifies its intrinsic value and direct importance. We should not hastily deviate from the path on which great men of all ages have planted flowers, gathered fruit and journeyed to renown. Every intellect should be open to their influence, for, in the words of Bulwer, "whatever be our future profession and pursuit, however they may take us from the scholastic closet and forbid any frequent return to the classic studies of our youth, still he whose early steps have led him into that land of demigods and heroes, will find that its very air has enriched through life the blood of his thoughts, and that he quits the soil with a front which the Greek has directed to the stars, and a step which imperial Rome has disciplined to the march that carried her eagles around the world."

Such, then, are some of the elements which Alabama now lacks to secure her rank in the congregation of States. What we most greatly need as the pioneer of other preliminary changes, to invigorate our industry, to liberalize our designs and efforts, to promote the formation of facilities and improvements and retain our population, is a general elevation of sentiment and enlargement of views throughout the entire community. This will be measurably accomplished by the influence of educational and industrial conventions, and by a continual reiteration of the great truths in public addresses and

* Concluded from January No.

circling periodicals, which, like the repeated blows of a sculptor's mallet, will finally fashion the public mind to the form of manliness. But chief reliance must be placed on the culture of the young. Let them, at the fount of learning, imbibe the buoyant spirit that soars free from the jesses which are binding us, and Alabama will not float idly down the stream of time, but, like one of her own gallant steamers, will again bestir her iron energies, rapidly cleave the too sluggish waters, and glide exultingly on to her destiny and appointed station amid the assemblage of contending nations.

Let us now turn from this disagreeable view of our shortcomings, and contemplate the promise of the future. In these days, when national greatness consists in the perfection of the arts of peace, a State must depend for elevation on two causes, the general intelligence of its citizens and its natural resources. In the first, Alabama is not inferior; and her natural resources, on the whole, are surpassingly incomparable.

The agricultural capabilities of the State are well known, and need little remark. The one-eighth part of the State now under cultivation includes all the best land, but our resources in this respect are very far from being developed, and 15.21 inhabitants to the square mile, is a small fraction of the population which may, one day, find support within our borders. The States, South Carolina, Georgia, Alabama, and Mississippi, possess a much greater variety of soil and climate than any other section of the Union, and are therefore capable of yielding a greater number of products. Of these four States, no one will question that Alabama has the superiority in richness and depth of soil, as well as in a variety of uniform, genial seasons. In the production of the great staple we already excel the world, yet a glance at our agricultural statistics will show our cotton crop to be a small portion of the entire produce of the State. Our wheat, both chemical analysis and experience shows to yield a better and much more nutritious flour than that imported from the north. A thousand products, never as yet introduced, will, one day, yield abundant harvest, but we sincerely hope that Alabama will never cultivate for exportation any other crop than cotton. It has become one of the necessaries of life as much as grain, and will therefore always command good profits, while it is, at the same time, less injurious to lands than any other great staple product. The recent discovery of cotton seed oil, and the large manufacture to which it is apparently destined, we hardly hail with pleasure, because if the seed be no longer returned to the land, but is otherwise consumed, the im-

poverishing process will go on with about tenfold rapidity. The increasing culture of tobacco we view with dismay. Both the Virginia emigrant and the chemist know this to be the most sterilizing plant, and that in process of time the deepest, richest soil, must succumb to its blood-sucking vampirism. Even Cuba, the garden of the globe (were it not that it must soon change masters, and then, we may hope, its wasteful system) would, necessarily, under its present treatment, become as worthless as the banks of Newfoundland, and a fit recipient of the unhappy doom which the unprincipled policy of Britain proposes to inflict. Let us take measures to discourage all such deteriorating tillage here, that the fat soils of Alabama may retain for ages their superiority, their virgin strength and value.

But our lands do not require the extortion of the plough and hoe to yield rich products, for in their spontaneous growth Alabama has a vast source of wealth. We have here every variety of timber, from the invaluable live oak to the yellow pine, and without the present profuse plenty of these we should be essentially weakened in our prospects. Already has ship building fairly begun at Mobile, a business which will one day employ thousands of our people, and in 1851 nearly seven million feet of lumber were exported from that port. When we remember the vast area in Texas that is destitute of timber, it is difficult to over estimate the future importance of this trade.

The mineral resources of Alabama are entirely undeveloped and unestimated, but it is undoubtedly one of the richest sections of the Union. In the metamorphic region on the east we have a profusion of marbles of every shade and texture, and various other most valuable building materials. We may conceive the future value of these quarries when we recollect that granite and marbles of inferior quality are now transported block by block, at enormous expense, for whole buildings in Mobile and Montgomery. Beside a great variety of other products, metals abound. We have gold and silver, iron, manganese, lead and copper.* The gold and silver mines may enrich individuals but are of little State importance, one iron mine outweighing them all in value. And in Alabama iron of the best quality abounds. Hamilton Smith, of Ky., has demonstrated, by an extensive collocation of historical facts, that where the coal, the iron and the provisions are,

* I recently examined a specimen of rich copper ore from Wilcox Co., but do not believe that it exists in workable quantities at this locality, being probably, an alluvial deposit.

there will be the seat of manufacturing empire; and any one, who is acquainted with the social history of Great Britain, now the mistress of arts and commerce, is aware how much she owes her eminence to the presence, within a small area, of iron, coal, and lime. Now in these mineral riches Alabama, alone of all the Southern Gulf States, abounds. A liberal hand has stored, side by side with the plentiful ore of iron, inexhaustible quantities of flux and fuel for its reduction, to be in future a source of incalculable social wealth and industrial power.

But we have touched upon a yet more important mineral, the coal. Let us note a few facts. Our coal beds are the southern termination of the great Appalachian coal field, and extend further south than any others in the whole northern hemisphere. This, then, is the only one of the Gulf States that possesses any coal whatever; the Carolinas have none, and Georgia but a scant quantity, while ours would supply the whole for the next thousand years. Chemical analysis shows that it is not surpassed for manufacturing purposes by any bituminous variety in the United States, being next in this respect to the celebrated anthracite of Pennsylvania.* A chief engineer in the Royal Mail Steamship Line, after actual trials, pronounces it equal to the best Welsh coal, for steam purposes, which Welsh coal is said to be superior to the most valuable English coal. Here then we again behold Alabama peculiarly favored above other southern States, by another element of future greatness. We are compelled to view her not only as the seat of agricultural greatness, but the centre where the genius of manufactures will, one day, place her throne, and from which must issue those native products which will enrich adjoining States. Now, we all know that coal and the diamond are chemically and essentially one and the same substance, but which truly is the greatest treasure? Who would exchange these coal measures for the Brazilian

* We append some analysis of coal from several localities which will exhibit this fact in stronger light.

			Analysis.		
State.	Locality.	Analyst.	*Carbon.*	*Volatile Matter.*	*Ash.*
Va.	Midlothian.	Johnson.	53.01	28.25	14.74
Va.	Blackheath.		58.79	52.57	8.46
Md.	George's Creek.		70.75	16.03	13.22
Pa.	Blossburg.	Clemson.	73.74	75.00	11.26
	"	State Report.	62.80	32.80	5.20
Ala.	Tuscaloosa.	London Journal.	80.76	12.96	6.08

From this it appears that our coal has a small quantity of ash, also less volatile matter and more carbon in a given weight than any other bituminous variety in the United States.

mines? Our black opaque diamonds are incalculably more precious in their present form than if every ounce were suddenly transmuted by the magic of some successful alchymist into a Kohinoor, a Mountain of Light. The hills of north Alabama are the true treasury of the State. Here, long before Adam breathed, was deposited and locked in their secret cells of iron capital for us, which, in but one generation now to come, Alabamians will wield to control the social, commercial, and political destinies of surrounding, dependent States.

But the supremacy of Alabama does not stop here. Contemplate her 1,500 miles of internal navigation, and compare it with like facilities in other States. Examine her geographical position in reference to the Northeast and Northwest. The Alleghany range terminates within our borders; the approach of the Atlantic States to the Gulf is through our State, and the mighty West will pour its products intended for the Gulf and South Atlantic through our port. Let not this assertion startle us, for the time is coming when we will more than share with New Orleans the commerce of the great valley. In order more fully to understand this let us examine some particulars, and especially the effect of the Mobile and Ohio railroad upon the prospects of South Alabama and the port of Mobile.*

This road will not only bring all the produce of the contiguous portions of Ala. and Miss. into Mobile, but will fairly and successfully compete with the Mississippi river itself. For the distance from the mouth of the Ohio river to Mobile, *via* railroad is not 500 miles, whereas by water to New Orleans it is more than 1,000 miles. Hence it will require six times as many hours to reach New Orleans from the centre of the west as to reach Mobile, and there will be in all but 44 hours from the lakes to the Gulf. Moreover vessels can reach the Atlantic a day sooner from Mobile than from New Orleans. The advantages thus in favor of Mobile are manifestly overwhelming. Let us, in addition, recollect that all vessels trading in the Gulf and South Atlantic must get their coal at Mobile. This is the age of steam, and we are to supply the most important element in the development of this power on our southern waters. Again the proposed railroad to connect the Atlantic and Pacific is a magnificent conception. The line, however,

*Already has it been magical. In a single year after the projection of the road in 1849, the value of property in Mobile rose from 12 to 17 millions, or more than 40 per cent.

must lie upon a parallel of latitude, and therefore the products throughout its entire extent will be similar. No interchange will take place on the road, but at the termini there will be an enormous accumulation of commodities, thence to be distributed. Now the Mobile and Ohio railroad runs from north to south, the freight will consist of the varied products of different latitudes, and thus there will be established on the line itself a vast inland commerce, which will afford most valuable facilities to the producer, by placing him in cheap and rapid communication with the consumer. When we reflect on these and other striking facts it seems unquestionable that this road will be an invaluable source of superior prosperity to us, and that it must necessarily prove the great nerve of the land.

To those who have long been accustomed to look upon the Crescent City as the Queen of southern commerce, it will be almost incredible that Mobile has shipping facilities far superior and is by much the best port on the Gulf. We may premise that New Orleans is 110 miles from the Gulf, while Mobile is but 33, a difference of 77 miles. Captain Childe, Chief Engineer of the Mobile and Ohio railroad states that in Mobile bay there are 30 square miles of safe harbor and anchorage, and that on the bar at the entrance of the bay there are 20.75 feet of water at low tide, whereas over the bar at the south-east pass of the Mississippi river there are but 15.5 feet, the difference in favor of Mobile being 5.25 feet. Let me add that Prof. A. D. Bache, the distinguished superintendent of the U. S. Coast Survey, states that this bar has been deepening during the past 22 years from 17 to 20.75 feet and is still deepening and going seaward. Thus the cars, which, if desired, may advance to the open basin, can be brought alongside of vessels of 40 per cent. greater capacity than can get to New Orleans. But there is no necessity for the road to extend beyond the city. The Mobilians are now taking energetic and, I doubt not, effectual measures, as suggested by Mr. Albert Stein, to remove permanently the bar at the mouth of the river, there being at least $20,000, and perhaps more, I understand, already subscribed to effect this object. If this is accomplished nothing remains to be desired. In view of all these facts it is difficult to over-estimate the future greatness of Mobile as a commercial mart when the teeming millions of the northeast, west and southwest shall pour their treasures into her ample lap. Their consequences exhibit the destiny of Alabama on a grand scale, and assign her a future position in the commonwealth far above what the wildest unaided conjecture would have dared to conceive.

THE EARLY TIMES IN NEW ORLEANS.

From an old file of the Louisiana *Gazette*, we copied several years ago many interesting items relating to the early days of New Orleans, which have remained unused in our portfolio. They will interest, not only the citizens of that now empire city, but will be read in every quarter where her fame has travelled. This old file of the *Gazette*, reaching many volumes, now owned, we believe, by a private citizen, should be purchased for the use of the city or the State.

LOUISIANA GAZETTE, New Orleans. Published Tuesday and Friday, by John Mowry, in the house of C. Norwood, Bienville street, $10 per annum.

In the second number the publisher announces, (July 31, 1804,) the encouragement is not sufficient for him to publish more than once a week. He therefore hopes "that gentlemen who have kindly patronised him will admit the reasonableness of his apology," &c.

Oct. 5.—Imported from Africa, in the ship Sarah, Henry Kennedy, master, a cargo of upwards of 200 choice young healthy negroes, consisting of men, boys, women, and girls. Apply to James Moss, Jr., at Madame Chabot's, or to

JOHN MCDONOUGH, Jr., & Co.

Oct. 12, 1804.—For one week.

Arrived—Ship Fame, Baltimore.	Cleared—Brig Mary, Liverpool.
Brig Victoroine, Havana.	—— St. John, Havana.
Schr Lucy, Jamaica.	Schr Juliana, "
—— Hiram, "	—— Nancy "
Barge Hope, Natchez.	—— Charlotte, Pensacola.
Cleared—Ship Ocean, Bordeaux.	—— Paspartone, "
Brig Hiram, Philadelphia.	Barque Pallas, Bordeaux.

Oct. 12, 1804.—Notice: The mail for the future will arrive here every Monday, at 5 o'clock, P. M., and will start every Tuesday, at 7 o'clock, A. M. The mail will be closed at 6, A. M., the day of its departure.

B. CENAS, *Postmaster.*

POETRY (original) ON THE DEATH OF MRS. W. C. C. CLAIBORNE, Oct. 19, 1804.

The bright sun of the morn
Has finished his labors;
The eve is past in solemn silence
And lo! Eliza is no more.

Another on same.

Has Eliza then forever took her flight
To the bright realms of everlasting light?
Yes; she, impatient to obtain the prize,
Bid earth adieu, and climbed the azure skies.

Nov. 24, 1804.—Notice.—Convinced of the difficulties which grow out of the present circumstances, difficulties which every day affect the most learned in the law, and which the interests of individuals are often exposed to, the undersigned has the honor of announcing to the public, but more particularly those who favor him with their confidence, that, in order to avoid as much as possible the existing inconveniences inseparable from the circumstances of the moment, and also to act up to the sacred duties of his profession, he has formed a connexion with Mr. J. W. Gurley, attorney general, &c. L. A. DUPUY.

Dec. 28.—John Lynd, Sworn Broker—Wanted to purchase one hundred and fifty bales good cotton.

Nov. 2, 1804.—Account of a storm at Charleston, S. C., which occurred on 10th September, with full particulars. Letter given from Pittsburgh, speaks of the passage from Philadelphia having been made to that point in seven days. "I set out in two days in a covered boat for New Orleans, and the waters being good, hope to be there in twenty-five days."

Nov. 22, 1804.—Advertisements from the following persons: T. & D. Urquhart, O'Hara & T. B. Farrell, George W. Morgan, Francis Munball, John P. Sander-

son, John Poultney, Chew & Relf. There are in addition, advertisements of three vessels—one for Philadelphia, one for Baltimore, and one for sale—besides five notices of J. P. Sanderson, administrator. In some previous numbers no advertisements are found.

Nov. 16.—Monumental inscription.—Yesterday expired, deeply regreted by millions of grateful Americans, and by all good men, the federal administration of the government of the United States. Animated by a Washington, Adams, Hamilton, Knox, Pinckney, Wolcott, McHenry, Marshall, Stoddard, and Dexter. Æ. 12 years. It found the exports of our country a mere song in value. It has left them with above $70,000,000 per annum!

Prices current, November 23, 1804.

Bacon, 14 to 15 cents.	Lard, 15 to 18.
Butter, 25 to 30.	Molasses, gallon—none.
Candles, 65 to 70—spermaciti.	Rice, barrel—none.
Cotton, 17 to 18—scarce.	Sugar, $12 cwt. to $15.
Coffee, 25 to 30.	Tobacco, $5 cwt. to $6.
Flour, $12 to $12 50—superfine.	

To Sportsmen.—On Tuesday a race will be run between Captain Davis' horse and Mr. McCormick's mare, one-quarter mile, for one hundred dollars, over a beautiful road, about four miles up the coast, where the subscriber will have a barbacue and liquors for entertainment. JOHN McLAREN.

For sale.—Seven Congo negroes; four seasoned do.

ALEX. MILNE, Jr.

Feb. 12, 1805.—From the Constitutionalist.—Advertisement extra.—For sale, greatly below prime cost, all the right, title, claim, interest, and demand of the State of Delaware, of, in or to the said States' proportion or share of a certain tract or parcel of land called Louisiana. It is said to be very valuable, and no doubt it is, for it was lately purchased for $15,000,000. To carry the sum would take a line of carriages six miles long, all loaded with dollars. The value of this piece of land may also be known from the extreme fertility of the soil and its abounding with mountains of solid rock salt, etc., etc. * * This tract is at such an immense distance from hence there is not the smallest prospect of ever deriving any benefit or advantage therefrom, etc.

Feb. 19, 1805.—Now landing, from on board schooner William, Abram Waters, master, from Boston, lying opposite old custom-house, the following articles: 130 boxes cod-fish, 19 casks potatoes, 6 kegs butter, 6 barrels nuts, 2 pipes Holland gin. Also a few thousand joists and boards. J. TOURO.

Notice.—The post office has removed to the house in which Dr. Zerban resides, Royal street.

Received, by the Washington, from New York, and for sale by the subscribers at their store in Government street, 3,000 pieces India yellow long nankeens, first quality; Rowal and Madras handkerchiefs, by

March 4, 1805. J. P. SANDERSON & M. WHITE.

7,000 weight cocoa for sale by CHEW & RELF.

Directors of Louisiana Bank.—I inform those desirous to become stockholders that the register book is deposited with Stephen Zacharie, Cashier.

Removal.—George W. Morgan's store is at present in one of Madame Macartry's houses, near Madam Chabot's, and opposite to Mr. Hepp's tailor shop, where he offers for sale, etc., nankeens, silks, cottons, muslins, etc., etc.

June 4, 1805, Tuesday.—Extract of a letter from a gentleman in Philadelphia to his friend in this city, dated 19th April, 1805, received by yesterdays mail: "Col. Burr leaves this place in a few days for Orleans, via Pittsburg, and it is even said he is to take Gov. Claiborne's place," etc., etc.

Married, last evening, by the Rev. Father Walsh, Edward Livingston, esq., to Madame Marie Louise Magdaleine Valentine Davezac Castra Moreau, widow of the late Louis Moreau de Laffy.

Protestant meeting, Sunday, June 16, 1805.—The subscribers generally, having assembled agreeably to notice, proceeded to the choice of a denomination

from which a minister should be invited to come and settle among us, when it was found the vote stood thus: For an Episcopalian, 45; for a Presbyterian, 7; for a Methodist, 1—Whereupon, it was resolved, It is the wish of the Protestant citizens of New Orleans that an Episcopalian clergyman be invited to come and settle among us. Resolved, unanimously, That the church to be erected be called Christ's church.

Mail stage.—The stage is kept at Vassault's and Todd's Hotel. Will leave New Orleans every Tuesday morning, and arrive at Manchac Church (near B. Rouge) on the next day at 5, p. m. Passage $11. Passengers allowed to carry 14 pounds of baggage.

Friday, July 5, 1805.—Cotton scarce—23 a 24 cents.

November 12, 1805.—Martin Gordon & Co. having opened a wholesale and retail grocery store, etc., etc., they have on hand 8,000 pounds green coffee, a few cases and barrels white sugar, refined and lump sugars, coast sugars, brandy, wine, etc.

December 3, 1805.—Married, on Sunday evening last, at Baton Rouge, A. L. Duncan, esq., to Miss Fanny Mather, youngest daughter of Hon. James Mather.

December 17, 1805.—Scheme of a lottery, authorized by the legislative council of this Territory, etc. Prizes to the extent of $100,000. Joseph Saril, Joseph Tricon, John B. Labatut, Beverly Chew, John Watkins, Stephen Zacharie, Paul Lanasse, George Pollock, managers.

August 15, 1806.—Palfry, Shepherd & Co. offer for sale Castile and American soap, spermaceti and tallow candles, hogs' lard and tobacco, bacon and whiskey, &c., &c.

April 8, 1806.—Peter Cenas, storekeeper, informs the public he has removed to corner of Royal and Conti streets, where he keeps a handsome assortment of fancy dry goods.

January 13, 1806.—Notice—The copartnership of McNeal & Montgomery is this day dissolved. John McNeal, Wm. W. Montgomery.

Theatre.—On Tuesday, October 14, 1806, for the benefit of Mr. Clairville, will be presented the celebrated drama Filial Piety, or The Honest Criminal, in verse in five acts, in which Mr. Fontaine, as an amateur, will perform the part of the Earl Olban, etc, etc., etc.

An article in the Gazette, September 16, speaking of the wealth of Louisiana, says the staple productions are rice, cotton, and sugar; and a negro can plant easily and cultivate four acres, besides raising provisions. He says an acre of cotton will give 250 pounds cotton, at 20 cents, $50, or $200 to the negro. An acre of rice about the same. Acre of sugar produces, even in bad crops, 1,000 pounds sugar, besides molasses, valued at $87 50; four acres to the negro, $350. He gives facts:

Mons. La Ronde has 40 working hands, of whom 4 attended cattle and garden, producing	$1,500
135 acres cane, of which sold 12 acres	960
With rest made 180,000 pounds sugar, at $8 12	15,320
122 hogsheads molasses	1,220
To 40 negroes	16,520
Alexander Labranche, 60 hands, sugar 230,000 pounds, at 8	$18,400
Molasses, 165 hogsheads	2,805
	21,205
M. Destrehan, 40 hands, sugar	$17,775
Molasses	2,500
	20,335

He says there is not a sugar planter in Louisiana possessed of 150 slaves, of all ages or sizes, yet they make as much as the nabobs of the West India islands with four times their number.

A sugar plantation, 20 acres front on the Mississippi, or 800 acres, with all improvements, if between English Turn and the upper part of German, cost, estimated value, $50,000; add 60 prime negroes, at $500 each, $30,000; stock of horses, &c., $4,000. Total, $84,000.

Such an estate will yield, in sugar 250,000 pounds, at 8 cents	$20,000
Molasses	2,400
Total	22,400
Expenses of all kinds	3,000
Nett profit	19,400

or, 23¼ per cent.

Cotton estate, 600 acres, anywhere in the Mississippi or Orleans territory, with all improvements	$7,000
30 slaves, at $400 each	12,000
Stock	2,000
	21,000
Will produce 30,000 pounds cotton, at 20 cents	$6,000
Expenses	1,275
Profit	4,725

or, 22½ per cent.

August 8.—An acre or arpent of land, when planted in corn will produce 22 bushels, at 75 cents	$16 50
An acre in cotton, 250 pounds, at 20 cents	50 00
An acre in cane, 1,000 pounds, at 8 cents—sugar $80	87 50
An acre in rice, 20 barrels rough	52 50

October 7, 1806.—Married, at Attakapas, on Saturday, 27th ult., his excellency Wm. C. Claiborne, to the amiable Miss Clarice Duralde, daughter of Martin Duralde, esq., member of the legislature of this Territory.

CUBA.

ITS PRESENT CONDITION—THE REVENUES—TAXES—AGRICULTURAL INDUSTRY, ETC., OF THE ISLAND.

We have received, in advance of publication, the proof-sheets of a new work on Cuba, entitled *Llamamiento á la Nacion Española*, in which the author discusses with much ability the present condition and prospects of that unfortunate island. He enters into the character and workings of the Spanish colonial system, showing how it has operated in Cuba to depress industry of every description, except that of tax-collectors, and how it continues inflexibly to weigh upon the best interests, not only of the Cubans, but of Spain herself.

The Spanish colonial policy in Cuba has effectually ruined every species of agricultural industry, except that of sugar. This interest still continues—though sinking lower and lower every year—to maintain itself against the enormous exactions of the Cuban authorities. Not even a fifth part of the arable lands of Cuba are now under cultivation, in consequence of these exactions. The whole of them are owned by the Spanish nobility, who have ever done their best to maintain a species

of feudal system in Cuba—the workings of which are the legitimate causes of all the present Cuban oppressions.

The lands are leased out to the present occupants or tenants at the rate of more than $20 per acre; and then, in addition to this ernormous rent, are added the numerous and heavy imposts of the government. It may be a wonder to some to know how they contrive to raise sugar at all in Cuba, under such discouragements. This is effected by a most rigid system of economy on the part of the planters, by the introduction of the most improved machinery, thereby economizing in the number of the operatives, the supplies required, and in the superior quality of the sugar produced. But the chief cause of the success of the sugar planters in Cuba is the cheapness of labor, created by the African slave-trade. Were it not for this, and this alone, the sugar manufacture of Cuba would cease at once. The suppression of the supply of slaves from Africa would effectually ruin Cuba as it has ruined Jamaica; and this the Spanish goveenment clearly see. Hence their connivance at the trade in spite of England, in every way possible. The Spanish nobility, who are the possessors of the soil of Cuba, would be ruined by the abolition of slavery in that island.

At present the Cuban sugar planter does not realize above six per cent. on the capital invested. The cost of a sugar plantation, machinery, fixtures, utensils, and slaves, capable of making 4,000 boxes of sugar, is estimated at $319,500.* The cost of maintaining in full operation such a plantation is $36,119 per annum. The cost of renewal, annually, of slaves, beasts of burden, machinery, buildings, &c., &c., is $14,600; making the entire cost of maintaining the plantation in full operation, $50,710 per annum. The crop of sugar, 4,000 boxes, and the molasses, is worth $70,000; from which, deducting the cost of production, ($50,700,) there remains a profit of $19,290, which is only six per cent. on the capital of $319,500 employed.

This, however, is only the most favorable case possible, for the majority of the planters are far from realizing six per cent. During the past year, besides the hindrances to slave labor from the government, goaded on by the abolitionist governments of France and England, the cholera has swept off some 20,000 slaves, leaving an immense vaccum in the forces employed on the plantations. This has compelled the planters to hire slaves, sometimes at the rate of from $20 to $25 per

* *Llamamiento á la Nacion Española*, p. 11

month. To this may be added, that the pressure in the money market has compelled them to pay enormous interest on money loaned, to enable them to meet their heavy expenses and debts due; besides they have been compelled to expend large sums for foreign coal. All these drawbacks to the Cuban planter have met with no relief from the government. The heavy imposts are still continued, though the planters are on the verge of ruin.

The extent of these imposts we now propose to consider. All imported articles used by the planters on the plantations in the manufacture of sugar, pay a duty of from 29½ to 35½ per cent. *ad valorem*, and the freight on all imports is greatly increased by a tonnage duty of $1 50 per ton. An estate producing 4,000 boxes of sugar, usually exports supplies of various kinds to the amount of not less than $17,620 per annum. On these the duties, at the average rate of 30 per cent., amount to $5,286. The value of labor is also enhanced by these heavy import duties on articles of necessity, and, of course, the planter has to pay his employees 30 per cent. more for their services. A plantation producing 4,000 boxes of sugar, worth $64,000, pays to the government the following imports:

Duties on supplies	$5,943
Export duty on 4,000 boxes of sugar, at 87½ cents per box	3,500
The *Diezmo* tax	1,000
Taxes to the church	150
	10,584

This amount of tax on a sugar plantation of 4,000 boxes, is equal to nearly *one-sixth* of the entire value of the sugar produced.

All other branches of industry are equally burdened and rapidly declining. The cotton and coffee plantations, as is well known, have long since been entirely abandoned.

It would seem that Spain has carried, in Cuba, her system of oppression to the utmost stretch of human audacity and despotism; for now she can continue it no longer but by maintaining on the island an army, according to their own accounts, of near 30,000 men, and by guarding its coasts with a fleet altogether disproportioned to the wants of any island of that size.

The amount of the taxes of all kinds levied on the isle of Cuba in 1841, was $21,437,454, according to official data published at Madrid in the *Observador de Ultramar;* and according to a lengthy statement, also based on official data and published by the same journal, the Cuban taxes of 1850

amounted to about $25,000,000. This statement, although strictly correct, was nevertheless violently attacked by all of the government journals of Spain, which, notwithstanding their advantageous position for consulting the official statements kept from the public eye, could never be persuaded to examine them. The Spanish government never publishes any complete detailed statements of the colonial taxes, though it pretends so to do. In the statement for 1850, published at Madrid by the *Observador Ultramar*, all the omissions of the government were supplied. These omissions were intentionally made to hide the iniquity of Spain. The statement of Saco comprised the maritime duties, the duties received on contraband goods, lottery revenue, post office revenue, poll taxes, lawsuit duties, city taxes, court fees, transit fees, offices saleable and transferable, notary publics, forfeitures to the public treasury, tribunal taxes of the captain general, rents of the meat and fish markets, marriage gratuities, emancipation fees, funerals, turnpike tolls, business licenses, gambling licenses, tithes, exactions of tithe collectors, monopoly of the cleaning of sewers and privies, compulsory service of beasts of burden, port duties, matriculation fees, subscriptions for churches, cemeteries, highways, quartering of soldiers, bridges, hospitals, and the duty on wines, &c., the whole amounting to $24,864,427.

Don José Antoine Saco estimates that nineteen years ago the revenues of Cuba amounted to $18,000,000. He shows that the heavy demands made on the Cubans are not by any means, all of them, on account of the necessary expenses of the insular government. In 1846, for instance, there were paid out of the treasury of Havana for the support of consuls in the United States..... $57,798
To her Majesty, the Queen Mother, due her from August to November, 1845..... 222,000
For bills drawn on the treasury by the minister of Spain in Mexico..... 100,000

$379,798

The official statements published from time to time by the captain general, are framed so as to make it appear that the enormous contributions levied upon the island are all returned to it again, in the form of internal improvements and necessary government expenses; but this is all a fiction, as the disclosures of Don José A. Soce sufficiently show. He might have added others. It is true that vast sums are expended on and

about the island, but it is only to hold the Cubans in subjection by the strong arm of power. A vast army is now quartered on them, and a marine force at the expense of some $5,000,000 guards its coasts.

Up to last September there had been paid out of the Havana treasury, to the Queen Mother, whom the late revolution in the Peninsula banished from Spain for her offences, the sum of $1,498,500, as appears from the official statements published in the Havana journals on the 8th of September, 1854, relative to the payments to the Queen Mother.

Since Concha's return to power, he has published what he calls a complete statement of the revenues of the island for 1850. He makes the whole amount to only $12,326,896, including a balance of $939,239 remaining in the treasury for 1849. The author of the *Llamamiente á la Nacion Española*, in reviewing the items of this report of Gen. Concha, shows that a large number of them are far short of the actual amounts which they should represent. He shows that the item of $70,877, set down as the 4 per cent. on the costs of law suits, should be $1,771,943; that the post office revenue, stated by Concha at $62,579, cannot be less than $1,500,000; that the revenues derived from the lottery of Havana, set down in Concha's statement at $641,279, ought to have been put at $2,565,119, as the actual amount drained from the people. The tax called *el diezmo*, put down at $493,461, should be double that amount.* According to the same author, many other important items in General Concha's report are not even approximations to the truth.

The author of the *Llamamiento á la Nacion Española** addresses his work to the public authorities of Spain, and endeavors to enlighten their minds on the subject of the present condition of Cuba. He argues at length with them the various subjects which relate to the welfare of the Cubans, such as the tenure of the Cuban domain; the oppressive system of its proprietors; the necessity of maintaining the system of negro slavery in the island; the utter inapplicability of the apprentice system; the fraudulent exactions of the colonial authorities, and many other subjects; all of which are treated in an able manner, and in a spirit of moderation, courtesy, and justice, which commands the respect of the reader.

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* We shall continue our review of the work.

THE AZORES OR WESTERN ISLES.

A writer from on board the United States steamer Massachusetts, understood to be a gentleman of Georgetown, D. C., thus speaks of these islands:

Upon the 24th of July we made the Azores or Isles of Hawks, frequently called the Western Islands. Of these the first land visible was "Pico," whose lofty summit was discernable at a great distance, and on our approach presented an appearance inconceivably bold and majestic; its insulated situation, extreme elevation, and luxuriant scenery combining to form a view of the most impressive grandeur. The peak was seen proudly towering above massy clouds, which, hanging upon the sides of the mountain, at intervals occasioned a partial obscurity, and even appeared to envelope the base itself. The extreme height of the peak is estimated at about 1,100 French toises (about 1,172 fathoms, or 7,000 feet.) These lofty regions are not only unsubdued by human industry, but apparently destitute of even the slightest vestige of natural vegetation. Here nature reigned in the midst of the most picturesque and barren wildness, more striking as contrasted with the luxuriant fertility of the lower district. The summit of this mountain, whose sides are neither very steep nor uneven, is surmounted with a sugar loaf so very regular that it appears to be the work of art rather than of nature.

At noon the same day we reached Fayal, an island that takes its name from the evergreen Faya that grows in such abundance here. We had been merrily rocked on our passage, and right glad were we to see our destined port. Those who still confessed the power of the sea-god in their faltering steps and dizzy brains—for we have several green seamen amongst us—climbed with alacrity the deck to view the panorama we were fast approaching before the breeze. The sight of land is ever beautiful, and every town appears from the ocean to advantage in his eyes who, for some time previous, has seen nothing but a wide expanse of waters around him. Fayal, however, presented a most beautiful picture. The eye could not cease to dwell on it, surrounded as it was by hills covered with luxuriant verdure—the brilliant garb that nature wears under the tropics, and which was glistening in the bright sun's rays; for so delightful is the climate and so prolific the soil here that both European and tropical plants arrive at their greatest perfection. The face of the earth is so diversified as to exhibit in some places, within a small extent, gardens of aromatic plants, pastures, vineyards, orangeries, &c., with volcanic hills and productions. The inhabitants have been

described as an innocent, good, and honest people, "who prefer the olive to the laurel, and who would seek for distinction rather by industry than by arms."

SOUTHERN SOCIETY AT THE PERIOD OF THE REVOLUTION.

The spirit of hospitality, it is said in "The Republican Court," from the very beginning has been boundless in Virginia, and, indeed, throughout all the old southern States. Necessity may be said to have contributed somewhat to make it so. The settlements frequently were quite remote from each other, and the traveller often could find no shelter at night, unless he obtained it under the roof of the friendly planter, who would have been pained at the suspicion that he either expected or desired pecuniary remuneration.

It is quite easy to see how, under a system such as this, even with all its unavoidable imperfections, some of the noblest traits of human character would develope themselves. On the part of the wealthy, generosity, kindness, guidance, and support, were constantly called forth for the benefit of those below them in condition. Accustomed, too, to direct, and often to command, (for the legitimate power of the country was in their hands,) they grew up, generation after generation, with a proud spirit of personal independence, on which was naturally engrafted a high sense of honor. A Virginian or Maryland gentleman of the olden time, seated on domains that spread over hundreds of acres, and living in what was very like a baronial state, and educated, perhaps, in Europe, polished manners, hospitable, generous, cordial, manly, "with high thoughts seated in a heart of courtesy," was a noble specimen of men. When the revolution commenced, they to whom this description would apply soon showed themselves.

If we turn further south the picture, in many of its aspects, is still the same. In the old towns at the east, and on the shores of North Carolina, were men who, in some instances, were large proprietors, many of them educated and trained to the learned professions abroad, filing all the important offices of the colony, as high-toned and independent as any men on the continent. To these the common people had long been used to look with deference and respect; and these swayed public opinion in the east. In a broad belt, at the west, between the Catawba and Yadkin rivers, were a sturdy and brave race of yeomen, known as the "Scotch Irish" Presbyterians, lovers of liberty, from their very cradles, who looked up to their spiritual teachers and the leading laymen of the country for direction. The leaders were men of cultivated

minds. Frankness and fearlessness were the characteristics of these brave yeomen. When the revolution commenced, no men answered more promptly at the first call of their leaders than the common people of North Carolina; no leaders sounded the alarm and uttered the call sooner; and nowhere, throughout the colonies, did the leaders more completely possess the confidence of the people, or more perfectly control and sway their actions.

In South Carolina it was very much the custom to educate the sons of the wealthy at the English universities; and those who filled the liberal professions had, in many instances, studied abroad. The aristocracy was in some parts of South Carolina as clearly defined as in Virginia. The same hospitality, generosity, and high sense of honor were also found among the affluent and the educated. In casting his eyes over the names belonging to this colony, one is struck with the large number evidently French. These belong to those who descended from the Huguenots, driven out of France by the superlative folly of Louis XIV, in revoking the edict of Nantes. Never was an act of greater madness committed by a bigoted ruler, and never was there one which more effectually wrought its own temporal punishment. The infuriated monarch enriched almost every civilized State in Europe at his own expense, and impoverished France by the loss of millions in trade, and thousands of her best population. Some came to America, and the largest body of them found a home in South Carolina. Here, as in every other land where they found an asylum, they more than repaid the benevolence which sheltered them, by their piety, their skill, and their industry. The revolution shows many South Carolinian Huguenot names. They were all patriots in that desperate struggle.

RUSSIA.

The regular troops of the Czar, before the war, were estimated thus:

Infantry	468,000
Cavalry	85,000
Cossacks	20,000
Regulars	537,000
Guns	1,000
Garrisons and resources	150,000

Here, as the ordinary military establishment of Russia, are about 750,000 men. But the Czar has the power, which he has twice exercised since the war commenced, of making levies upon the mass of the population. Each of his last levies added 150,000 men to his army, swelling its numbers to 1,000,000, of whom one-half are actually available in warfare. With little difficulty could Russia actually present a million of men at arms to all opposers, not so disciplined, perhaps, as the well-drilled soldiers of England, France, Prussia, and Austria, but able and willing to fight, under orders, as their comrades have fought, and are fighting, in the Crimea.

RECORDS—NATIONAL AND STATE.

EVENTS OF THE MONTH, ETC.

Indian Office.—Within the year fourteen treaties have been entered into with Indian tribes.

The most important have been concluded with the Omahas, Ottoes and Missourias, Sacs and Foxes, of Missouri, Iowas, Kickapoos, Delawares, Shawnees, Kaskaskias, and others, Miamies, and the Menomonees. Vigorous efforts have been made, and are still being made, to execute in good faith all the provisions and stipulations to be performed on the part of the government, and the Indians seem desirous of strictly conforming to their respective engagements. The appropriations to carry these treaties into complete effect were made at so late a period that it was found impracticable to accomplish all that was designed. In these treaties the government evinced a liberal policy towards the Indians, and if it is pursued and prosecuted efficiently, it must lead to the most beneficial consequences. The principal thing to be feared is, that the poor, ignorant, unlettered, and inexperienced Indians may be brought into too close contact with the whites, which generally degrades them, because they seem inclined to contract their evil habits instead of imitating their virtues.

Land Office.—We have received a report of the Commissioner. It is a document almost entirely statistical, and of but small general interest. The following synopsis will present its main points:

There have been surveyed during the year 9,384,464 acres. On the Pacific side the surveys have reached 1,686;171 actes. The quantity brought into market was 8,190,017 acres. There were sold 7,035,735 acres; located with bounty warrants, 3,402,620 acres; located with certificates, 14,182 acres; making a total sold and located of 10,452,537 acres.

There has been reported and selected as swamp land 11,033,813 acres; for internal improvements 1,725,196 acres, which, added to the figures already given, makes a grand total of 23,238,-382 acres.

For the quarter ending September 30, 1854, there were cash sales of 2,-894,306 acres; reported as swamp lands 1,496,964 acres; aggregate 4,779,628 acres.

The excess of sales for the year over 1853 was 5,952,239 acres.

During the year the number of patents issued was 120,000; 2,000 accounts were settled; 2,812,000 tracts were entered.

The total number of warrants issued under the act of 1817 is 86,678, embracing 12,995,880 acres, of which there has been located 77,535, including 11,734,080 acres. There are still outstanding, under this act, 9,141 warrants, covering 1,261,800 acres.

Under the act of 1850 there have been 11,538 warrants, covering 666,320 acres, and there are still outstanding 4,833 warrants, equal to 274,680 acres.

Under the act of 1852 there have been issued 184,595 warrants, embracing 12,881,560 acres; and there are still outstanding 43,414 warrants, equal to 2,771,400 acres.

The aggregate number of warrants issued under these three acts is 282,809, covering 26,543,760 acres, and there are outstanding warrants to the number of 57,388, equal to 4,307,880 acres.

Pension Office.—Number of pensioners June 30, 1853, was 11,867. Annual amount payable to them, $1,070,079. Same, June 30, 1854, 14,065, and annual amount payable to them $1,172,-651 63. Number of revolutionary soldiers on the roll June 30, 1853, 1,395; number of revolutionary soldiers on the roll June 30, 1854, 1,069. There have been taken from the rolls of the army pensioners during the year ending June 30, 1854, by death, 643; by transfer to the Treasury Department, as unclaimed pensions, 883; total, 1,526. Of the navy pensioners for the year ending September 30, 1854, 24 are reported dead, and 38 transferred to the Treasury Department as unclaimed pensions. Of those transferred to the Treasury Department but few are again restored to the roll.

The *Patent Office* is in excellent condition, and the manner in which its affairs are conducted gives universal satisfaction. Still the character of the force, as now authorized by law, is not such as to attain the accomplishment of all that could be desired. By adopting a new arrangement—the result of urgent necessity—the Commissioner has dispatched more than the usual amount of business. Instead of six principal examiners with two assistants each, there have been, practically, since the first of April last eleven principal examiners,

each with one assistant. Thus, instead of the usual tedious delays, most of the work is up to date.

Since the first of January last there have been issued upwards of sixteen hundred patents, and within the year the number will reach nineteen hundred, which will be about double the number issued during the last year. The arrangement by which this result has been produced was judicious, and has proved satisfactory to all parties interested.

DELAWARE.—The governor says:—"For the years 1852 and 1853 the aggregate amount of revenue was $130,963, while that of the two years immediately preceeding was only $72,267, the ordinary expenses being about the same, leaving an accession of $58,695 within the period of two years, a large portion of which has been appropriated to various purposes of public improvements, which are not only matters of great convenience to our people and the community at large, but permanent and lasting benefits to the State."

The indebtedness of the State in January last, was only $25,719, and the governor states that this debt will soon be discharged, and leave reliable resources abundantly adequate for future expenditures.

ILLINOIS—*Message of the Governor.*—The debt of Illinois on January 1, 1854, according to the governor's message, was $13,994,614 93. The State has paid in interest and principal during the last two years $3,950,037 96, and at this ratio will discharge the whole debt in 11 years. The finances of the State of Illinois are in excellent condition. The governor speaks in high praise of the Illinois Central railroad, considers their policy wise, and calculated to advance the permanent interests of the company, and produce the most favorable influence on the minds of the public. The governor estimates the revenue to be received by the State from avails of the road for the year commencing on March 24 next, at $50,000. The tax the State receives from the road is contingent, being 7 per cent. on the gross receipts of the main trunk and branches. The $50,000 referred to is estimated to be received from the main trunk.

NEW YORK.—The first annual message of Governor Clarke shows the receipts of the general fund to be $1,955,000, and the payments $1,817,000. He anticipated a considerable decrease in the receipts in consequence of the reduction of the taxes, and a reduction in the receipts of the canals. The debt of the general fund on September 30 was $6,355,000. The capital of the school fund has increased $42,000 during the past year. The receipts of the canals during the year amount to $2,989,000, and the expenditures to $1,238,000. This surplus does not meet the purposes for which it was designed by $104,000. This is attributed to commercial embarrassments and the short crops.

On the liquor question Governor Clark defines his views at considerable length, and strongly advocates an entire prohibition of the sale of ardent spirits, citing many and forcible arguments in favor of such an enactment. He considers such a prohibition clearly within the limits of the Constitution, and hopes a bill will be framed that will effectually suppress the sale without infringing just personal rights.

The banking statistics show an increase of capital during the year of $7,081,000. He recommends a modification of the law allowing the deposite of bonds and mortgages as security. He recommends a repeal of the law imprisoning witnesses, and favors further encouragement of the free school system.

The governor recounts the particulars of the Lemmon slave case, and the attitude assumed by Virginia, and recommends that provision be made to defend the rights and interests of the State. He regrets the veto of the harbor and river bill, and considers that a proper tariff would have obviated the present distress. He strongly denounces the repeal of the Missouri compromise, and considers its restoration demanded for the security, peace and permanent welfare of the country.

SOUTH CAROLINA.—The governor concludes his inaugural message with the following:

"Weak in numbers and small in territory, we have always exerted a commanding influence in the national councils. We owe it all to our high intelligence and moral characteristics, and these have been preserved and kept alive by the conservative element at the foundation of our institutions. I appeal to you, then, by the glorious recollections of the past and the encouraging hopes of the future, to stand by your ancient landmarks. Begin not the work of pulling down and patching up. The first step you take in that direction may be fatal. The watchword will be reform—the shout will be change—until you have pulled down over your heads

the best balanced system of government that the world has yet looked upon.

Upon the subject of our relations with the general government, I have but little to say. I have no new opinions to announce, and no specific remedy to propose to meet the dangers which are before us. The signs of the times are as open to your vision as they are to mine. We may interpret them differently, but to my mind they indicate a settled purpose on the part of the northern States to assail and degrade or ruin the southern States. How, or when, the south shall meet to redress the perils of her condition, I will not venture to anticipate. Time will demonstrate whether our institutions tend to lift us up as a people, promptly to protect our rights and perpetuate our liberties, or whether they will sink us down to the level of degraded and ruined provinces."

The following is extracted from the message of Governor Manning, on relinquishing his office:

"Whilst the State for which you legislate can scarcely be said to have kept pace with others in this rapid march of improvement, it may be claimed for it that it has more early attained those qualities of government which are most likely to insure the greatest amount of real happiness to the citizen—maintained a higher degree of social order—preserved a more even balance of power among the co-ordinate branches of government—and been less controlled by cupidity and ambition, those certain forerunners of national degeneracy. Well, then, may you take pride in your State. The feeling is always admissable, but especially so when you live under a constitution and laws conceived in justice and administered with purity; under a legislature independent in its views, and capable and rapid in the discharge of its functions; under executive content with their limited prerogatives; under a religion without the heterodoxies of these present days; and under a sound, and just, and high-toned public sentiment. I cannot, therefore, recommend to you, gentlemen, too strongly to watch over with solicitude this noble political organization, and to preserve it from those changes and innovations which tend to weaken, and eventually destroy, the happy equilibrium which exists; and I fervently hope that, far down in the vista of time, when all memorials of us are lost, except those which may remain among its archives, a gracious Providence will preserve this State government, in all its usefulness and beauty, to remote posterity, fresh and glorious in its immortal youth."

MICHIGAN—*Message of the Governor.*—The governor of Michigan, in his annual message sets down the available means of the State treasury during the year, at $986,474, and the expenditures at only $433,469, leaving a balance of $553,004. The funded and fundable State debt amounts to $2,531,545. The governor says:

"The interest on our State debt is promptly paid as it becomes due. There is now a large surplus in the Treasury, and it will, doubtless, continue to increase, unless some provision shall be made to absorb it by liquidating the State indebtedness."

The governor thinks a large surplus in the treasury should be avoided, and therefore recommends that the act of 1848 be amended, so that interest on part paid bonds of the State, which shall not be surrendered within a specified time, shall cease. He recommends that a general railroad law be enacted; that no general banking law be passed; that all the old bank charters be repealed; that bank notes under five dollars be banished; and that swamp lands be sold subject to drainage by the purchaser, and that the proceeds be appropriated to the extinguishment of the State debt, or to the educational fund, or a part to both. He also states that the work on the Sault St. Marie canal is in such a state of forwardness that it will be completed by the opening of navigation. It will cost nearly double the original estimates, and the work has been very thoroughly performed.

ARKANSAS—*Governor's message.*—The amount in the treasury will be deficient in the next six months, and must be supplied with treasury warrants. The State of Texas has failed to surrender a fugitive from justice on the requisition of Arkansas.

The bonds issued in behalf of the bank of the State of Arkansas are also outstanding to the amount of $939,000 of principal and $713,615 of unpaid interest. The principal is not due until 1868.

The estimate of the governor is that the assets of the real estate bank, with the sale of the mortgaged lands of the stockholders, will in the end extinguish the whole of that debt and on the State bank debts the deficiency will be about one million of dollars only. The State owes no other debt which its current revenues will not discharge.

The governor estimates the number of acres of swamp land to which the State will be entitled under the act of Congress at eight millions of acres, of which 5,667,051 have been confirmed to the State by the Secretary of the Interior, and 2,857,640 have been sold or appropriated.

The subject of education is referred to for the purpose of lamenting that so few schools are in operation under the State law establishing common schools, and to recommend an amendment of the law and an increase of the fund.

The railroad question is considered in especial reference to the Cairo and Fulton railroad. This road is in fact a part of the Cairo and Fulton railroad of Missouri, the two roads being the subjects of a large grant of lands by Congress. The surveys have been completed, and the requisite steps as prescribed by the act of Congress must now be taken to secure and select the lands granted. In further aid of the work he recommends that one million acres of the swamp lands granted to the State by Congress shall be appropriated to this road in the nature of a permanent investment for the benefit of the swamp land fund; 500,000 acres to each branch from Little Rock to the Mississippi river and to Fort Smith. He also recommends a like appropriation of 500,000 acres to the Mississippi, Red River, and Ouachita railroad, of which so favorable an opinion has been expressed in New Orleans.

North Carolina—*Governor's message.*—The amount of the State debt is only $2,896,270. Alterations are proposed in the revenue system to equalize taxation. The banking capital is inadequate to the wants of the State. Manufacturing and commercial cities and towns should be built up in the State. Free suffrage is recommended. The railroads of the State are prosperous.

The governor refers to the blessings bestowed upon the people by a kind Providence, especially in their exemption, to a considerable extent, from the diseases and calamities which have visited other States and nations, and gives his congratulations upon the spirit of progress and improvement which animates the people, indicating a bright prospect for the destiny of the State. He mentions the improvements in agriculture, and the facilities afforded the farmer and the mechanic in a cheap and expeditious mode of transportation for their surplus products. The means of education by the University, the numerous colleges and academies, and by the common schools, are noticed in appropriate terms. The latter system is doing incalculable good. The sum of $180,850 has been distributed from the literary fund during the year for common schools. The University educates gratuitously a number of meritorious young men every year. The geological examinations are almost daily disclosing valuable additions to the inexhaustible mineral wealth of the State. The faith of the State has been scrupulously preserved, and her credit stands deservedly high, both at home and abroad. The institution for the education of the deaf and dumb and the blind is in successful operation, and affords great facilities for imparting instruction to the unfortunate class for whom it was established.

Maryland.—The report of the comptroller of Maryland on the condition of the finances of the State, represents them in a favorable light. The aggregate receipts for the year ending September 30, 1854, amounted to $1,208,347, which, added to the balance in the treasury at the begining of the fiscal year, ($345,358,) forms a total of $1,553,705. The expenditures for the year ending September 30, 1854, were $1,175,581, leaving in the treasury a balance of $378,124, subject to the interest on the public debt and other charges, so as to reduce the amount to $109,946.

There was paid to free schools during the year the sum of $64,610.

The amount of revenue directly derived from the city of Baltimore appears to have been $366,391, nearly one-third of the entire revenue of the State; besides which the dividends from road stocks, &c., and from various licenses to agents of foreign corporations, amounting to nearly $200,000, are principally derived from Baltimore.

Missouri.—The total amount received in the treasury for the two years ending October 1, 1854, is $808,665; the total amount expended for the same time is $628,483 74; the total balance in the treasury October 1, 1854, $234,889 59; the surplus revenue in the treasury October 1, 1856, is estimated at $433,139 59. The revenues collected under the present system of taxation, are more than sufficient to meet the current expenses of the State government.

On the important question of banking, the governor expresses a hope that the General Assembly will act in a prompt and practical manner. As by the Con-

stitution the establishment of free banks, even if deemed expedient, is forbidden, it is recommended that the charter of the bank of Missouri be extended for such a period as the legislature shall deem prudent, and that its capital stock be increased to the sum of five millions of dollars.

The time has arrived when it is absolutely necessary to extend additional aid to the railroads now in the course of construction, or abandon them altogether. They cannot be abandoned without great injury to the State, the people, and all our substantial interests. There are numerous methods by which the progress of these important works can be aided with safety to the treasury.

The geological survey of the State is progressing. The governor recommends an additional appropriation of $20,000 to complete it in a thorough manner.

The management of the Penitentary under the present system, has been eminently satisfactory.

The State University is in a prosperous condition.

The Deaf and Dumb Asylum and the Lunatic Asylum, located at Fulton, have been judiciously and humanely conducted. The Institution for the Education of the Blind, at St. Louis, has also been eminently successful.

NOTICES OF LATE BOOKS.

Writings of William Gilmore Simms: Redfield, of New York, is now engaged upon a republication of nearly all of the productions of the gifted American novelist and unrivalled Southern delineator, William Gilmore Simms. The works are published in a series, in very handsome style, and will hererfter form a place in every library. Many of them have had a reputation for over twenty years on both sides of the water, and have gone through various editions. A republication of the whole, in the style of Cooper, Irving, and others, will be a service to American literature, of which we have no doubt Mr. Redfield will receive the fruits. Though comparatively young, such are the powers of Mr. Simms, that he has written more than any man of his age, and has written little or nothing that has not been received by the public with favor. His editorial charge of the Southern Quarterly Review, for several years, has given staisfaction to all American scholars.

The volumes we have received are illustrated by Darley, and embrace—

The Patisan,
Catherine Walton,
Woodcraft,
The Scout,
Melechampe,
The Yemassee.

} A new dedication is prefixed to each.

The same publisher sends us the *work of Charles Gayarré, of Louisiana*, complete in three volumes, embracing—

1. French Domination, 2 vols.
2. Spanish Domination, 1 vol.

Although the works were referred to in our last, it is difficult to let an opportunity slip to commend the historical labors of Mr. Gayarrē to the American people. No man among us has so profound a knowledge of the Spanish and French domination upon this continent in early times, and none have had the same advantages of investigation and research. Mr. Gayarrē is a chaste and elegant writer, and gives a charm to history of which few others are capable.

The ablest of American historians—Bancroft, compliments him in several of the chapters of his last volume. Mr. Gayarrē has labored long and faithfully for his native State, of which he is proud, and is one of the purest and most distinguished of her talented sons.

Mr. Sanford, late chargē to Paris, in the absence of the minister, sends us a copy of his work on *Penal Codes of Europe*, of which an edition has been published by Congress. The work proves him a man of research and of liberal views. It is of such men that our diplomats should consist. They contribute to enrich the literature, administration, and jurisprudence of the country. The present work embraces almost every State of Europe, and is very full, in particular, upon the administrative changes in France since the revolution of 1848.

Louisiana State Register, comprising a statistical account of the State, &c.: By A. W. Bell, Baton Rouge. We consider this a very valuable work, and as the first of its kind in Louisiana, it is deserving of general encouragement. The field is very rich in material, and the author has made use of it amply. The register of all State, parish, and other officers occupies a large space in the volume.

The *Banker's Almanac* for 1855: New York. J. Smith Homans, publisher of Banker's Magazine. Price $1. Contents: I. Calendar and chronology of important financial events. II. List of banks in the United States, December, 1854. Capital, name of president and cashier of each. III. List of private bankers in the prominent cities and towns in the United States; also in Europe, South America, Australia, East Indies, &c. IV. Usury laws of the States, with the laws relating to damages on domestic and foreign bills of exchange in each State. V. Commercial and financial tables of the United States and Europe.

Abstract of the Laws of the District of Columbia: This is an excellent and valuable publication, prepared by Mr. Thompson, a member of the Washington bar, and supplies a want long felt by the profession here. It will be useful, moreover, to the profession all over the country, considering the important position which is held by the federal city. We have marked some portions for extract, in relation to slavery in the District, etc. The author has given the highest authorities in support of every proposition enunciated.

Our Periodical Exchanges.—Hereafter, if it is reciprocated, we shall give the leading contents of each of the monthly issues of the many periodicals with which our own is exchanged. It is thus that information of interest can be imparted and our common editorial success promoted. In the December number of last year, we made a partial commencement.

EDITORIAL NOTICE.

Arrangements have been made for a more complete organization in the business of the Review, upon which the editor is determined soon to devote his exclusive time and attention. The mechanical portions of the work have been and are still executed in Washington City, and the distribution is conducted from that point in conjunction with the New Orleans office. The advantages of Washington for such a journal are, perhaps, superior to any other point in the whole south. The expenses of printing and publishing are one-half less than in New Orleans, and our stereotyping operations can be conducted here, though at no other point to the southward. The consideration of stereotyping, and economy, rendered it necessary, some time ago, to make some changes, and we sold out, at great sacrifice, a large and expensive printing office, established by us at New Orleans. The editor's own residence will be in both cities—in the winter and spring at New Orleans, in the summer and fall at Washington. The office may at all times be addressed at either point.

A few sets of the Industrial Resources of the south and west still remain on hand, in handsome binding, and will be supplied through the mail at $6, (postage at the expense of the office.) The work is published in 3 vols., 1,800 pages, octavo.

From the United States Economist, New York.—It supplies a want that has long been felt in relation to this country, and compares in usefulness to the celebrated Progress of the Nation, by the late G. R. Porter, esq.

From the Baltimore Patriot.—No one knows better how to write on these subjects than Mr. De Bow, as he has long made them his study. This work should be in every gentleman's library, as it must be a standard work, and one that future generations will be pleased to refer to.

From the Washington Union.—Altogether the work forms an invaluable compendium of all matters pertaining to the industrial resources of the south and west, and is eminently deserving of a place in the library of the statesman, the political economist, and the man of business. * * * *

Prof. De Bow has been engaged for many years upon this comprehensive and most laborious work, which is valuable to citizens of every section of the country, and for which his previous labors for the last seven or eight years at the head of his widely circulated Review, in the bureau of statistics of the State of Louisiana, in his professorship of political economy, etc., have eminently fitted him.

Agriculture and Farming.

VARIETIES OF COTTON.*

The different kinds of cotton which are imported and used in Great Britain have been examined under the microscope by Dr. Ure and by Mr. E. Wilson. To their observations we are indebted for the following measurements. In examining a sample of cotton, it is usual to take a portion of it between the forefingers and thumb, and laying the portions as they are successively drawn out back again on and parallel to the filaments from which they have been drawn out; and repeating this process several times, small tufts are formed, in which the respective lengths of staple may be observed.

The fibres of cotton, when drawn out from the mass in which they appear entangled, display so many irregular twists as to give them a jointed appearance, and, as Mr. E. Wilson observes, "in this state they resemble a string of oval beads, pointed at each extremity, and connected by their points."

The entire fibre appears to taper finely to both ends, that which is adherent to the seed being somewhat the thickest. Under the microscope the fibre is observed to be continuous, moderately twisted, flat, ribbon-like, clear, and transparent in the middle, and opaque towards each margin. The finer and more uniform the fibre, and more inclined to twist, the better is it suited for spinning into fine yarn. But if the fibres are short, broad, and formed of flimsy ribbons, they are less suited for machine spinning, though they may yet, as before mentioned, be twisted into thread by the delicate fingers of the Hindoo.

The value of cotton depends on the length, strength, and fineness, as well as on the softness and equality of the fibre. But these essential qualities are modified by color and cleanliness, that is, freedom from knots and impurities, so that there may be less waste in spinning. Formerly color had great influence, but now the great distinction is into long-stapled and short-stapled. The different kinds of cotton differ from each other not only in the above properties, but also in considerable differences in quality between different samples of the same kind of cotton. "The finest quality of Sea Island is sometimes worth three times as much as the common quality of the same class. The variation of quality in most of the other denominations is from 20 to 25 per cent., and in none of them

* From the work of Royle.

is more than 50 per cent." These are sometimes divided into three or four qualities, as ordinary, middling, fair, and fine. At other times these are still further subdivided, as into inferior, ordinary, middling, good-middling, middling-fair, fair, good-fair, fine, or good and fine. "Except the better qualities of Sea Islands there is no sort of cotton which is now confined in its use to any peculiar or exclusive purpose. By mixing different sorts together, and by careful management in preparing the mixture for spinning, the manufacturers can now make a substitute for almost any particular kind of cotton, except the very best. It is only requisite to add, that the long-stapled cottons are generally used for the twist or warp, and the short-stapled for the weft."

Sea Island, or long-staple cotton, the most highly esteemed of the cottons, is remarkable for the length and fineness of its fibre as for its silky softness. Among white cottons it is distinguished by a slight yellowish tinge of color. This kind sells in England from eighteen pence to two shillings, and has sold as high as five and seven shillings a pound. The quantity is limited, from the peculiarity of physical circumstances required for its production. The fibres are equable, about 1½ inch in length, and examined under the microscope, about $\frac{1}{2000}$th of an inch in diameter, formed of flattened cylinders transparent in the middle, opaque towards the margin, and more or less twisted. Dr. Ure has observed some kinds crimped transversely with irregular bandages, and some with flimsy ribbons and warts which adhere to the sides of the filaments, called neps by spinners. Mr. Wilson describes the Sea Island as thick and narrow, but looking the finest of all as seen with the naked eye. This kind is employed for spinning the finest yarns.

Upland, or short-staple cotton, under which names are now usually included the produce of the interior of Georgia and Carolina, as well as of Alabama, Mississippi, Louisiana, and Tennessee. It used to be, and is sometimes still called *Bowed*, from the cotton of Georgia having been formerly cleaned with the Indian cotton-bow. Though shorter in the staple and unequal, this is white in color, much esteemed, and forms the bulk of the cotton of commerce. The staple is one inch to one and a quarter inches in length. The best kinds are fit for spinning as high as No. 50, some higher; the shorter kinds are worked up into No. 30 and other coarser yarns; but mixed with good Egyptian or with Pernambuco cotton, even these can be spun into higher numbers. Under the microscope, the fibres appear less twisted than others, some as

cylindric fibres with many twists, of the width of about $\frac{1}{1400}$th of an inch; thin and broad.

EGYPTIAN.—The best Egyptian cotton ranks next to Sea Island in quality and length of staple, though it is not usually so well cleaned. It was only about the year 1821 that the Pasha began the cultivation, by importing seed from America and the Mediterranean and from Brazil. These different kinds may, therefore, be met with in cultivation there, though the Sea island yields the best kind of cotton called *Maho*, which is used here like that kind for the finest yarns. It has a staple of $1\frac{1}{4}$ to $1\frac{3}{8}$ inches in length, from $\frac{1}{1500}$th to $\frac{1}{2000}$th of an inch in breadth, uniform, spiro-cylindrical, thin and broad. Some excellent cotton has been sent from Port Natal; that from the island of Bourbon used formerly to be much esteemed. Some has also come from the west coast of Africa.

WEST INDIAN.—The West Indies supplied England with the largest quantity of cotton in the eighteenth century; but the cultivation was neglected when sugar became more profitable, and the imports have greatly fallen off. But the cotton is long-stapled, silky, and may be produced of a quality equal to Sea Island. Bourbon cotton is the same species that is cultivated in the West Indies. The cotton of Porto Rico was at one time considered to be the best; that of St. Domingo has been spun into No. 100 yarn; and some of the finest cotton ever grown was in Tobago by Mr. Robly, between 1789 and 1792. The cottons of Barbadoes, Guadaloupe, and Jamaica, were also highly esteemed. Bryan Edwards (Hist. of the West Indies, 1793) mentions a green-seeded cotton, from which the cotton can only be separated by hand. Inferior kinds, or shorter-stapled cottons, may, therefore, be imported from these islands. Dr. Ure describes the St. Domingo cotton as composed of narrow twisted ribbons, from $\frac{1}{1000}$th to $\frac{1}{1200}$th of an inch, with a few flattened cylinders and some spiry fibres.

SOUTH AMERICAN COTTONS.—In the year 1780, Mr. Bryan Edwards states that "the finest grained and most perfectly cleaned cotton which was brought to the English market was, he believed, that of the Dutch plantations of Berbice, Demerara, and Surinam, and of the island of Cayenne;" and that these cottons sold at that time for two shillings a pound. The first importations of cotton are stated to have first taken place from Maranham in the year 1781. The Pernambuco was soon afterwards sent, of so fine and superior a quality as to be highly esteemed, and its price ranked next to the Sea Island. The staple is long and fine, generally well cleaned, glossy,

some with a yellowish tinge; spins into a stout yarn, and is esteemed by hosiers. It continues to be imported into England from all these places, as well as from Bahio, Maceio, Para, and Ceara, also from Peru; inferior qualities from Carthagena. The fibre is in length about $1\frac{5}{10}$ to $1\frac{1}{8}$ of an inch; is cylindrico-spiral, about $\frac{1}{1500}$th to $\frac{1}{2000}$th of an inch in diameter; some with a few twisted ribbons and warty excrescences on the sides of the filaments.

EAST INDIAN COTTON.—Considerable, though varying, quantities of cotton, we have seen, are imported from India. It varies a great deal as obtained from different districts; is esteemed for its colour, though all is short-stapled, and generally sent in a dirty state to market. In those of this country it is known by the name of Surats, Madras, and Bengal, while the name *Surats* is often used as a general term for Indian cottons. Some of this cotton is of good quality and fit for general purposes, while the great mass is only bought when American cotton is dear. The cottons of Surat, of Broach, and of Berar are all included under the name of *Surats*, forming the kinds which are most esteemed here. The cottons of Cutch, of Candeish, &c., are likewise exported from Bombay, whence also England obtains the cotton of Coompta, which is produced in the southern Mahrattaern country and in the most southern part of Berar. These are also cottons naturally of good quality. Under the head of Madras, the cottons of Salem, Coimbatore, and Tinnivelly are included, which rank higher than the cottons of Bellary, Guntoor, and the ceded districts. Bengal cottons include those from the northwest provinces, from Bundlecund, as well as what is imported from Nagpore and Berar. The latter kinds are of the same quality as are exported from Bombay; but they are generally used up by the weavers of the upper parts of the Bengal presidency. Some Bourbon cotton is also exported from Madras, the produce chiefly of the southern provinces of the peninsula; though esteemed, it is inferior to the original Bourbon. The Indian cottons, under the microscope, appear less spiry; a few flattened cylinders, with many flimsy ribbons and warty excrescences, varying in diameter from $\frac{1}{600}$th to $\frac{1}{1000}$th of an inch; some are $\frac{1}{1500}$th to $\frac{1}{2000}$th of an inch. In length differing from $\frac{17}{20}$ths to $1\frac{1}{10}$th of an inch.

MEDITERRANEAN COTTONS.—Much cotton is cultivated in the countries surrounding the Mediterranean sea. It is generally the produce of the Indian species of plant, though American seeds have been introduced into some other places as well as into Egypt. These are cultivated in Asia Minor, in

parts of Greece and the islands; generally known as Levant, some as Smyrna cottons. The Italian cottons are produced in Sicily, in Calabria, near Naples, and in Malta. The cottons of Sicily, of Calabria, and of Castellamare, are the best, and are probably the produce of an American species. A Nankin cotton is cultivated in Malta, and used there. Most of these cottons are employed for native manufactures in the countries where they are grown, or are exported for the use of the manufacturers of the continent. They are seldom brought to Great Britain, except when the price of cotton is very high.

Though we have noticed the appearance of the filament of cotton under the microscope, it is to be observed that the fingers of practised brokers have a delicacy of touch that enables them to judge most correctly of the fineness and length of staple, and some will pronounce, even in the dark, on the value of cotton. But the different varieties might yet be subjected with benefit to further microscopical examination, to ascertain the effects of the different processes of culture, in the several soils and climates of different countries, on the length, breadth, and smoothness of the fibre.

THE SUGAR PRODUCT—PROCESS OF MANUFACTURE.

BY DR. WRAY, OF ENGLAND.

DEFECATION.—I shall now proceed to consider the better modes as deduced from practical experience and experiment. 1. Two filtering boxes, each of about three feet square and four feet deep, with a division in the centre running from the top of the box to within an inch or inch and a half of the bottom, are filled by layers of pebbles, coarse sand, gravel, and very fine sand, then coarse sand, gravel, and pebbles; that is, four layers in rotation in each division, commencing with pebbles and finishing with them, so that in both divisions the pebbles are uppermost and the fine sand is at the bottom one foot deep in each division. A piece of basket-work lies on the top of the pebbles of the receiving division, whilst the discharging division has none.

The cane-juice, in coming from the mill, passes through two or three wire-gauze strainers, (as is usual,) then flows into the basket-work, descends through the four strata in the one division of the filter, and rises up through the other in like manner; being discharged, by means of a lip, into the clarifier. When one clarifier is filled, the juice gutter is moved on to the second filter, which is already prepared and fixed over the empty clarifier. The first filter is then pushed along a slide

to the cleansing tub, when the whole of the contents are taken out—each strata separately—and washed. To facilitate this, a piece of fine matting or coarse cloth is laid over each strata, as it is placed in the filter, so that in emptying it, no difficulty occurs in separating the several layers; which are accordingly well washed and immediately returned to the filter; the water wherein they are washed being upset in the skimmings-gutter, passes into the distil-house. Whilst the gravel, sand, &c., are being washed, the filter is also washed down quite clean, and then washed with lime-water, to prevent anything like acidity.

One man will empty the filter, cleanse the whole affair thoroughly, and return it to its place, all nicely packed again, in a quarter of an hour; so that it is ready for use long before it is required.

When in the clarifier, heat is applied, until the liquor has attained a temperature of about 150° Fahrenheit, then about ¾ lb. of temper lime is added to a 450-gallon vessel in the form of cream of lime (by the addition of water,) and the whole is well stirred up until the lime is supposed to be well blended with the liquor. The heat is then allowed to go up to about 180° to 200°, which raises a thick scum, that after a while hardens at the top and cracks; whereon the fire is withdrawn, and the liquor allowed time to precipitate; say from 15 to 30 minutes.

The cock is then turned, and (the first quart or two being caught in a pail and thrown back into one of the other clarifiers) the clarified liquor runs into a filter, made on the same principle as the former ones, but filled with fine-grained (coarsely-powdered) vegetable charcoal. In this case, the filter is provided with very fine wire-gauze on the top of both its divisions, so that the pieces of charcoal cannot rise; but the liquor passes down one division and rises up the other freely, running direct into the grand copper (first evaporator.) This filtration occupies but a very short space of time, and from the matter retained by the charcoal, shows how beneficial it must be. One filter is used to run off about 1,000 gallons of liquor; it is then removed to be cleansed, and the second filter takes its place: thus there are four filters in this system, or rather two pair; one for the cold, raw juice, and the other for the clarified liquor.

The *defecation*, properly so called, ends here: but in the first evaporator more alkali (lime-water) is added, sometimes a considerable quantity, not all at once, but at intervals; and again in the second and third evaporators, and the second tache, lime-water is added, from a watering pot; which in

the case of the second tache is sometimes varied, by giving a saccharate of lime, (lime mixed with thin sirup, and allowed to precipitate, the liquor forming the saccharate.)

The usual skimming, of course, takes place during evaporation; and when concentrated, the sirup is run off, by means of a large discharge valve, into coolers or (unheated) granulators; every second skip being mixed together to induce the formation of a large grain.

Remarks.—In this system, the filtration of the raw juice and that of the partially clarified liquor is attended with very decided results: I have seen the liquor passing from the charcoal filter into the first evaporator in a highly clarified state; which could not be the case were temper lime not used in the clarifier. The small quantity of lime used in the clarifier is added when the temperature of the liquid reaches 150°; because at about 140° to 150° the coagulation of the gummy and albuminous matters commences, and the acid which held them in solution is set free: also because the acid forming the base of the ammoniacal salt contained in the glutinous matters is disengaged by the loss of ammonia; both which acids would immediately attack the sugar, and render a portion of it uncrystallizable. At this juncture the lime comes into play; one portion of it immediately saturating these disengaged acids, and the other, those not disengaged: that is, those still in combination with the dissolved gluten and the ammonia.

In this manner the clarification can be conducted at a temperature of not higher than 180° Fahrenheit, which is seldom exceeded; this moderate heat,* in conjunction with the alkali, being considered much more safe and efficacious than a far greater heat, unaided by the alkali.

The after course pursued in the evaporators is simple and judicious: it is quite impossible to lay down as a fixed rule what quantity of lime ought to be used, as it depends so greatly on the quality of the juice in the first instance; but the greatest range that I have known in boiling-houses, pursuing the above system, is from ¾ lb. to 2¼ lbs. in 450 gallons, including its treatment in the clarifiers and evaporators.

The filters are of common wood, and are made on the estates, at a cost of about five or six shillings each.

2. *Defecation by means of heat in the clarifier, and heat and lime in the precipitator.*—According to this plan, each clarifier has a precipitator of similar dimensions, hung on a lower level, so that the contents of the former can be drawn down into the latter.

* Sometimes the liquor will clarify at 165° Fahrenheit.

The clarifiers are so arranged that they can be heated by the heated air from the evaporating ranges, or by their own fire, as may be desired; the precipitators, on the other hand, are heated solely by their own fires, and have therefore no connexion with the flues of the boiler ranges. The cane-juice, in coming from the mill to the clarifier, passes through three strainers of different degrees of fineness, which deprives it of its grosser particles. The fire is then allowed to act on the vessel until the temperature of the juice reaches from 180° to 210°, at which it is kept until a thick crust of scum has accumulated at the top, and it begins to crack, discovering small pearly-white bubbles rising in the cracks. The fire is then withdrawn, fifteen or twenty minutes is allowed for the heavier bodies floating in the liquor to precipitate, and the partially clarified liquor is carefully run off into the precipitator.

Here the fire is urged until the liquor boils, during which time a man stands by with a measure of strong lime water, and a scummer; a portion of the former he adds every now and then, stirring it well into the liquor, then waiting each time to skim off any scum that rises. In this manner he keeps adding the alkali and skimming the liquor until very little scum rises, when he examines a little liquor in a wine-glass, and if he discovers the signs of flocculi floating in it, and finds, both by taste and smell, that sufficient lime has been given, he withdraws the fire immediately and completely, and allows the liquor time to precipitate. This time is seldom more than one hour, or one hour and a quarter; when it is drawn down into the evaporators, and goes through the usual routine of boiling to concentration; a little lime water, or saccharate of lime being added if occasion be seen.

Remarks.—In this method the lime is not given in the clarifier to avoid the effect it is said to have on the coloring matter contained in the juice; and its gradual addition in the precipitator is to saturate the acids as before described, and to assist the temperature employed in effecting the complete coagulation of the albuminous matter. The palpable mistake is, however, in supposing that the flocculent particles floating in the liquor will precipitate in so short a time; for I think it no exaggeration in saying that six hours are requisite for such boiling liquor to cool down and precipitate its flocculi. It therefore occurs that, as the time allowed is much too short for precipitation, the unprecipitated flocculi will pass into the evaporators, and become part and parcel of the concentrated sirup, when it leaves the tache for the coolers. The simple

addition of the wood charcoal filters, mentioned as used in the preceding system, would render this method infinitely more complete than it can be without them, and it is one so easily made that no doubt it will be adopted.

THE HIRELING AND THE SLAVE.

The following lines are extracted from a poem lately issued from the Charleston press, understood to be from the pen of a distinguished scholar and retired politician of South Carolina. It certainly furnishes a true and beautiful parallel between the over-tasked and starving operative and the southern slave. A later commentary is found in the New York Herald of 16th December, in an account of a meeting of mechanics in the Park, where one John Paul indulged in a strain of wholesale agrarianism which is often but the language of despair.

But we give the promised extract from the Charleston poem:

"Where hireling millions toil in doubt and fear,
For food and clothing, all the weary year,
Content and grateful, if their masters give
The boon they humbly beg—to work and live;
While dreamers task their idle wits to find
A short-hand method to enrich mankind;
And Fourier's scheme, and Owen's deep device,
The drooping hearts of list'ning crowds entice
With rising wages, and decreasing toil,
With bounteous crops from ill-attended soil;
If, while the anxious multitudes appear,
Now glad with hope, now yielding to despair,
A seraph form, descending from the skies,
In mercy sent, should meet their wond'ring eyes,
And, smiling, promise all the good they crave,
The homes, the food, the clothing of the slave;
Restraint from vice, exemption from the cares
The pauper hireling ever feels or fears;
And, at their death, these blessings to renew,
That wives and children may enjoy them too;
That when disease or age their strength impairs,
Subsistence and a home should still be theirs;
What wonder would the promised boon impart,
What grateful rapture swell the peasant's heart;
How freely would the hungry list'ners give
A life long labor thus secure to live!

"And yet the life, so unassailed by care,
So blest with moderate work, with ample fare;
With all the good the pauper hireling needs,
The happier slave on each plantation leads;
Safe from harrassing doubts and annual fears,
He dreads no famine in unfruitful years;
If harvests fail, from inauspicious skies,
The master's providence his food supplies;
No paupers perish here for want of bread,
Or lingering live, by foreign bounty fed;
No exiled trails of homeless peasants go
In distant climes to tell their tale of woe;

Far other fortune, free from care and strife
For work of bread, attends the negro's life;
And Christian slaves may challenge as their own,
The blessings claimed in fabled States alone—
The cabin home, not comfortless, though rude,
Light daily labor and abundant food,
The sturdy health that temperate habits yield,
The cheerful song that rings in every field;
The long, loud laugh that freemen seldom share,
Heaven's boon to bosoms unapproached by care,
And boisterous jest and humor unrefined,
That leave, though rough, no painful sting behind;
While, nestling near, to bless their humble lot,
Warm, social joys surround the negro's cot;
The evening dance its merriment imparts,
Love, with his rapture, fills their youthful hearts;
And placid age, the task of labor done,
Enjoys the summer shade, the winter sun;
And, as through life, no pauper want he knows,
Laments no poorhouse penance at its close.
" His too the Christian privilege to share
The weekly festival of praise and prayer;
For him the Sabbath shines with holier light,
The air is balmier, and the sky more bright;
Winter's brief suns with warmer radiance glow,
With softer breath the gales of autumn blow;
Spring with new flowers more richly strews the ground,
And summer spreads a fresher verdure round;
The early shower is past; the joyous breeze
Shakes pattering raindrops from the rustling trees,
And with the sun, the fragrant offerings rise,
From Nature's censers to the bounteous skies.
With cheerful aspect, in his best array,
To the far forest church he takes his way;
With kind salute the passing neighbor meets,
With awkward grace the morning traveller greets;
And joined by crowds, that gather as he goes,
Seeks the calm joy the Sabbath morn bestows.
" There no proud temples to devotion rise,
With marble domes that emulate the skies;
But bosomed in primeval trees that spread
Their limbs o'er mouldering mansions of the dead,
Moss cinctured oaks and solemn pines between,
Of modest wood, the house of God is seen,
By shaded springs, that from the sloping land
Bubble and sparkle through the silver sand;
Where high o'er arching laurel blossoms blow,
Where fragrant bays breathe kindred sweets below;
And elm and ash their blended arms entwine
With the bright foliage of the mantling vine;
In quiet chat before the hour of prayer,
Masters and slaves in scattered groups appear;
Loosed from the carriage, in the shades around,
Impatient horses neigh and paw the ground;
No city discords break the silence here,
No sounds unmeet offend the listener's ear;
But rural melodies of flocks and birds,
The lowing, far and faint, of distant herds;
The mocking-bird, with minstrel pride elate,
The partridge whistling for its absent mate;
The thrush's soft, solitary notes prolong,
Bold, merry blackbirds swell the general song;
And cautious crows their harsher voices join,
In concert cawing, from the loftiest pine.

"When now the pastor lifts his earnest eyes,
And hands outstretched, a suppliant to the skies;
No rites of pomp or pride beguile the soul,
No organs peal, no clouds of incense roll.
But, line by line, untutored voices raise,
Like the wild birds, their simple notes of praise;
And hearts of love, with true devotion bring,
Incense more pure to Heaven's eternal King;
On glorious themes their humble thoughts employ,
And rise transported with no earthly joy;
The blessing said, the service o'er, again
Their swelling voices raise the sacred strain;
Lingering, they love to sing of Jordan's shore,
Where sorrows cease and toil is known no more."

"They have organized what they call a relief association there, and at the head of it is a master-builder, a man who is immensely rich, and who made his money from the labor of the poor; and now, in gratitude for what they have done for him, he is willing to treat them to some soup. All those fellows have got rich by the labor of the poor, and now, in return, give them this "stuff," and precious food it is. Why, a man might search a month without finding a trace of anything like meat. These rich men themselves do not live on soup—they have nice roast turkey and cranberry sauce, and spring chicken and oyster sauce, and this from the money they make out of the poor, whom to satisfy after they have robbed them, they offer a concoction made from the very refuse of the market.

"Don't mind how these people talk—they will humbug you. We need not starve if we do our duty. In this great rich republic we are compelled to pay even for our water. Nothing is without its price, and this state of affairs has been brought about by the extravagance of the rich.

"It has been said we could save money if we chose; but how are we to do it? These speculators have made flour $12 a barrel, and potatoes 50 cents a peck, and butter 2s. 6d. and 3s. a pound. Now, the Creator has given me a desire for those things, and I must gratify that desire; and if I do so, how am I to save money?

"The speaker was here interrupted by a police officer, who desired him to desist, as his remarks might lead to a riot. This produced great excitement in the crowd, who loudly called on the speaker to go on. Paul, however, left the steps, and accompanied the officer to the chief's office, where he promised that he would not say anything to inflame the crowd or lead to a riot.

"While he was absent, Mr. Job Clavers made a few remarks, and offered the following, which was adopted:

"*Resolved*, That poor families living in the city, who are unable to pay their rents during hard times, shall not be turned out of their homes by avaricious landlords or their agents; and also, that a vigilance committee be appointed to carry the above into effect."

THE SOUTHERN PINE FORESTS—TURPENTINE.

In our last we published Colonel James' report upon the turpentine product, made at the instance of a convention held in Mobile in December. We now present Mr. Prince's report upon a kindred and equally important branch of the same subject.

The committee to whom was referred the resolution of Col. Prince, on the subject of establishing a market for naval stores and other purposes, having had the same under consideration, beg leave to make the following report:

Being citizens of Alabama, and feeling a deep and abiding interest in the prosperity of the State and the city of Mobile, and being fully satisfied that a complete and fair exposition of the growing importance of this branch of domestic industry will excite in the citizens of said city an interest which they must necessarily feel in cherishing and fostering the same, and that it will induce a cordial co-operation with us on their part, and being desirous of making Mobile both the depot and mart for the same, respectfully invite its citizens to meet us in corresponding liberal spirit. But until such time as we shall be able to dispose of more than a sufficiency to supply the demand for the consumption of the city alone, we shall be compelled, as heretofore, to seek a foreign market for the sale of our production, much against our own inclinations and the interest and welfare of the State and city. Some eight years since this business was commenced under the auspices of our enterprising fellow-citizen, Colonel R. D. James, of Clarke county, on a very limited scale, and by way of experiment; yet from such small beginning, and in so short a time, it has expanded into an importance embracing the sum of two millions of dollars of capital invested in its production, and is now yielding the amount of one million and sixty thousand gallons of turpentine, and one hundred and thirty thousand barrels of rosin, worth three quarters of a million of dollars.

Our vast pine forests heretofore remaining uncultivated, and utterly worthless in a pecuniary point of view, both to the general government and the State, lying waste and unproductive in wealth to the citizens or revenue to the State—we would on this point call your attention to the present fact that now more than a million of acres of land have been entered and

are in partial cultivation in turpentine; when lands, instead of paying no revenue to the State, or a revenue at the value of $1 25 per acre, pay in proportion to the enhanced value accruing from their cultivation, affording to the poorer and more destitute portion of the population of the State easy and constant employment, with such ample remuneration as to allow them all the necessaries and comforts and many of the luxuries of life; and where formerly in the silence of this solitude the crack of the rifle only was heard, the merry song and laugh of the happy laborer now resound, and this untilled wilderness is teeming with a contented population, and dotted over with schools for the education and improvement of the succeeding generation; and around the distilleries the moving wagons may be seen, and the ring of the cooper's axe constantly heard. The same pine wood heretofore inhabited by a population distinguished alone for their ignorance and poverty, living almost entirely by the rifle, may now be seen bearing an industrious, well-fed and well-clad people, adding not only to their own comfort by their labor, but elevating themselves into a sober, moral, and intelligent class of citizens, contributing in no small degree to the strength and wealth of the State.

The committee, drawing their conclusions from the fact that this business, from its commencement, has more than doubled itself annually, feel themselves safe in saying that with the same rates of increase for the next five years, it will amount to the sum of many millions of dollars, provided the inducements and encouragement can be afforded, producing a fair compensation to the cultivator for the investment of his capital and labor, and, we believe, that this point can be partially effected by communicating the knowledge to foreign ship-owners, that in all cases, and at all times, a cargo of rosin can be procured at this port, to be used as ballast, precluding the necessity of arriving here in ballast, by substituting at the port from whence they sail, salt, iron, coal, or other heavy articles, in place of the ballast which they now use. The facilities offered and overtures made by merchants of New-Orleans for the direct transportation of our products by through-boats to that city, exhibits the strong necessity on the part of merchants of Mobile for creating a home market and increasing the facilities for transportation from this port. On this point we shall not enlarge, as its consequences must be manifest. We would suggest, also, to the citizens of Mobile, to the enterprising and spirited stockholders of the Mobile and Ohio Railroad, and to the owners of steamboats navigating our waters: first to the

citizens of Mobile, in handling this product, the advantage accruing to them, existing in favor of the laborer engaged in the production of naval stores over that of cotton. The average product of the laborers in making cotton may be said to be at a maximum of four bales; upon which the receivers in Mobile would realize $10. The same laborers, engaged in turpentine, will produce 170 barrels of rosin and 30 casks of spirits, the handling of which, in the city, will produce, under the various charges of wharfage, drayage, storage, insurance, cooperage, and commissions, $87 50; $45 on the spirits, and $42 50 on the rosin. And we would further suggest, that the laborer in turpentine will consume of the merchandise of Mobile, to an amount equivalent to five hands engaged in cotton, from the fact that his occupation precludes the possibility of his producing any of the necessaries of life. To the stockholders of the railroad we would say, that similar comparative profit accrues to them from the transportation of these articles. From the transportation of the four bales of cotton brought to this market, (from the present limit of the turpentine region,) at your present charges of $1 59 per bale, the profit is six dollars; from the 170 barrels of rosin, and 30 casks of spirits, at the present charges of 30 cents per barrel on rosin, and 75 cents on spirits, is $73 50; $51 for rosin, and $22 50 for spirits. To the steamboat interest we would suggest that the profit is about the same. As an evidence of the fact that those charges cannot be sustained, and that you will detrimentally affect this great and growing interest, we would state the further fact, that at one distillery alone, in Choctaw county, there is now $15,000 barrels of rosin thrown away, because it cannot be shipped at the present high prices of freight and other expenses. You will, therefore, see the necessity of fostering and protecting an interest likely to pay you so well, and must force upon you the conviction of the expediency of reducing your charges so as not to nip in the bud the growth of a business promising such results. To satisfy the members of this convention that they need entertain no apprehension that the production of this article will exceed the consumption, they would call to their attention a few facts in connexion with its use in this country. The amount used in painting the four millions of dwelling-houses in the United States, or the exceeding great amount of this, together with other naval stores, used in painting and preserving our vast shipping and steamboat marine, your committee have no means of correctly stating. The amount of spirits used in the printing business, (there being 2,800 presses in this

country, at a pint per day each,) at a low estimate 2,000 casks, containing 112,000 gallons. The manufacture of India rubber, (but yet in its infancy,) consumed 4,650 casks, containing 187,000 gallons; this business, it is estimated by those conversant with the subject, will, in the course of five years, increase to the amount of $15,000,000; in importation of the raw material of caoutchouc it reaching now the sum of $5,000,000.

The extent of its use in gas, camphene, burning-fluid, and for chemical and medical purposes in this country, and the exact amount exported for foreign consumption in these and various other branches of manufacture, your committee have no correct data upon which to base an estimate. Your committee are advised, and are aware, that an immense amount of rosin is used in the manufacture of rosin oil, the amount of 86,000 barrels being converted into this article in one factory alone in the city of New York. A similar amount, nearly, (say 24,000 barrels,) being converted into this oil in the State of North Carolina, besides a large amount at Norfolk and various other factories in the United States; the exact quantity used by these is not definitely known. The consumption of rosin in the lighting of cities and private residences, also affords an outlet for a very considerable amount; the capital of the United States, and some of our best hotels, being lighted exclusively with gas made from it. The extent of the soap-making business, in which rosin enters in the ratio of about 50 per cent., is an interest of no insignificant magnitude, and is a source of the greatest consumption, and yet the largest portion of this article consumed seems, from the shipments abroad, to enter into the manufactures of foreign countries. And, in conclusion, we would remark, that under no circumstances can the price of spirits fall below 30 cents per gallon, for in that event it will be used to an unlimited extent in the production of gas; and it is produced in no other country to any great extent, except the United States. All of which is most respectfully submitted.*

*For many interesting statistics relating to turpentine at the south, see Vol. III, De Bow's Industrial Resources. The amount produced in North Carolina three years ago was estimated at 800,000 barrels, the largest portions of which being distilled in the State. Estimated value of the whole, $2,000,000; number of persons directly employed, four to five thousand; number of stills, one hundred and fifty; of the value, $225,000.

AGRICULTURAL STATISTICS OF GREAT BRITAIN.

Estimate of the extent of land in the United Kingdom under the principal descriptions of crops in 1850–54; the average produce per acre; the total produce; the produce under deduction of seed; and the average total value of such produce.

Crops.	Acres in crop.	Produce per acre.	Total produce.	Produce under deduction of seed.	Av. per quarter.	Total value.	
ENGLAND.		*Quarters.*	*Quarters.*	*Quarters.*		£	*s.*
Wheat	3,000,000	3¾	11,250,000	9,642,857	45s.	20,696,428	5
Barley	1,000,000	4½	5,400,000	4,628,572	27s.	6,248,572	4
Oats and Rye	2,000,000	4½	9,000,000	7,714,286	20s.	7,714,286	0
Beans and Peas.	500,000	3¾	1,875,000	1,607,143	28s.	2,250,000	4
Potatoes, turnips, and rape	2,500,000	£7 per acre				26,000,000	0
Clover	1,300,000	do.					
Fallow	800,000						
Hops	50,000	£15 per acre				780,000	0
Gardens	250,000	do.				3,750,000	0
Total	11,400,000		27,525,000	23,592,858		67,439,286	13
SCOTLAND.							
Wheat	350,000	3¾	1,137,500	947,917	43s.	2,038,021	11
Barley	450,000	4	1,800,000	1,500,000	26s.	1,950,000	0
Oats	1,200,000	5	6,000,000	5,000,000	20s.	5,000,000	0
Beans and Peas.	50,000	2	150,000	125,000	28s.	175,000	0
Fallow	100,000						
Potatoes	200,000	£7 per acre					
Turnips	450,000	do.				7,700,000	0
Clover	450,000	do.					
Flax	5,000	£15 per acre				75,000	0
Gardens	35,000	do.				525,000	0
Total	3,290,000		9,087 500	7,572,917		17,463,021	11
IRELAND.							
Wheat	400,000	3	1,200,000	1,000,000	40s.	2,000,000	0
Barley	320,000	3½	1,120,000	933,334	24s.	1,119,999	12
Oats	2,200,000	5	11,000,000	9,165,667	20s.	9,166,667	0
Potatoes	1,400,000	£8 per acre				11,200,000	0
Fallow	300,000						
Flax	140,000	£15 per acre				2,100,000	0
Gardens	25,000	£12 per acre				300,000	0
Total	4,785,000		13,320,000	11,100,001		25,886,666	12
Grand total	19,475,000		49,932,500	42,265,776		110,788,974	16

1. Consumed by man: Wheat, 15,500,000 qrs.; oats, rye, and maslin, (a mixture of rye and wheat,) 10,650,000 qrs.; barley for malting, food, &c., 6,000,000 qrs.; beans and peas as meal, 700,000 qrs.; total qrs., 32,850,000.

2. Consumed by the lower animals: Corn, principally oats, used in the feeding of horses and other animals, in distillation, manufactories, &c., 16,350,000 qrs.; total consumed by man and the lower animals, &c., 49,200,000 qrs.

It is seen from the former estimate that the corn produced in the United Kingdom, applicable to consumption, amounts to only 42,265,770 qrs. But to this has to be added foreign corn annually entered for consumption at an average of the seven years ending with 1852, viz: Wheat and wheat flour, 4,231,185 qrs.; barley, 870,786 qrs.; oats and oatmeal, 1,162,546 qrs.; rye, 99,510 qrs.; peas and beans, 565,759 qrs.; total qrs., 6,929,786; total consumption, 49,196,556 qrs.

CULTURE OF THE VINE AT THE SOUTH.

It is regarded as a singular fact, that literally with mountains of iron, and resources sufficient to supply the world with salt, the people of the United States are still dependent for an immense supply of these articles on the labor of the Old World. We mention these as the more prominent necessaries of life which enter upon the great currents of trade, without any purpose to inquire into the often surmised causes which have produced the result mentioned—whether of cheaper labor, or of injudicious commercial legislation. But there is another article scarcely less, we may say, when we look to its consumption, a necessary of life, which is not only not produced in the United States, but has scarcely received passing attention either from our agricultural reformers or political economists. We allude to the culture of the vine, and the production of our own vines.

In Madeira, the Italian States, many of the departments of France, and the Rhenish provinces, the vine is the staple product of agriculture. Wherever the soil has been found suited to its production, it has superceded the cultivation of all the cereals on account of the larger profits which it returns. A failure of the vintage is the precursor of suffering and famine, while the vine clustering with generous fruit always brings gladness and plenty. It has been found that the acre planted with the vine, in Europe, produces much greater profit, constant and pressing as is the demand for breadstuffs, than when planted in cereal or vegetable products. And yet the common table wines (*vins ordinaires*) may be bought in Paris, after paying the octroi duties, at five sous (about five cents) the bottle. And if lands in Europe so valuable for the cultivation of breadstuffs, and when wine is so cheaply purchased, may be more profitably turned into vineyards, should we infer how greater would be the profit realized from a successful vine culture in the United States, where breadstuffs are lower, and wines from 200 to 500 per cent. higher? The experiments made near Cincinnati show that it is a source of princely profits. $4,000 would scarcely purchase one acre of a well set vineyard in some of the departments of France, and $1,000 per acre, we believe, is the lowest estimate placed on such lands in Ohio.

Then why is it that in Virginia no attention has yet been bestowed on this most profitable branch of agriculture? Is it because we have not the climate or the soil? On the southern slopes of the Piedmont range throughout Virginia there is undoubtedly a climate, and, we believe, a soil unsurpassed in

the world for the grape. Here, as it never was in France or in Italy, the vine is indigenous. We have seen from the mountains of Bedford almost as fine grapes grown wild as can be found among our best garden varieties. Then why, again, is it that our agricultural societies, if private enterprise be not sufficient, do not give the subject some of the attention which its importance merits? If for no other purpose—and it would add vastly to the State—we would urge it upon public consideration, as the most powerful lever with which the curse of intemperance and its concomitant evils may be successfully operated upon. The most temperate people in the world are the peasantry in the vine-growing sections of Europe; whilst the most intemperate we know, the Swedes, are those furthest removed from the use of pure and unadulterated wines. We think our State Agricultural Society can do scarcely anything prospectively more advantageous to our agricultural wealth, or the sobriety of our people, than to institute such inquiries, and encourage such experiments, as may show the real adaptedness of our soil and climate to the successful cultivation of the vine.—*Lynchburg Virginian.*

COTTON—ITS VALUE, GROWTH AND EXPORT.

The following table, compiled from the United States Treasury report, for the United States Economist, New York, will show the export of cotton to different countries for the fiscal year 1853, with its value:

Exports of cotton in pounds for the last three fiscal years ending June 30, and its destination, also its value for the year 1853.

	1851.	1852.	1853.	Value.
Russia.....lbs..	10,098,448	10,475,163	21,286,563	$2,254,845
Prussia	523,288	.....	468,300	19,800
Sweden and Norway	5,160,974	5,989,025	6,099,517	618,857
Denmark	.....	37,042	435,169	39,597
Hanse Towns	16,716,571	22,138,228	22,671,782	2,259,909
Holland	5,508,670	10,259,042	7,038,994	668,132
Belgium	16,355,018	27,157,890	15,494,442	1,476,104
England	649,795,190	735,861,533	787,953,370	71,525,663
Scotland	19,943,449	15,758,801	30,643,128	2,997,547
Ireland	906,483	953,896	.....	.....
Gibraltar	156,653	123,803	89,960	9,423
British East Indies	.....	.....	45,715	5,375
Canada	22,623	14,133	6,287	588
British North American colonies	902	2,449	6,008	646
France on the Atlantic	167,059,259	176,629,086	184,525,459	18,818,635
France on the Mediterranean	2,105,312	9,585,184	4,701,454	429,441
Spain on the Atlantic	607,340	1,922,207	1,689,726	172,086
Spain on the Mediterranean	33,665,285	27,379,721	35,211,316	3,760,059
Cuba	113,572	294,853	196,892	40,374
Other Spanish West Indies	40,582	.....	.....	.....
Portugal	.....	98,285	87,691	9,542
Madeira	.....	.....	18,620	1,888

	1851.	1852.	1853.	Value.
Italy generally	8,184,306	12,865,445	14,789,864	1,420,550
Sicily	.....	.....	1,069,095	96,219
Sardinia	2,136,100	5,568,823	1,629,025	156,422
Trieste, and other Austrian ports on the Adriatic	17,309,154	23,948,434	17,968,642	1,863,821
Mexico	845,960	6,700,091	7,463,851	813,501
Chili	.....	18,000	30,000	3,000
Total.....lbs.	927,237,089	1,093,230,639	1,111,570,370	109,456,404

RECAPITULATION.

	Sea Island.	Other descript'ns.	Total.	Value.
Total in 1851.....lbs.	8,299,656	918,937,433	927,237,089	$112,315,317
Total in 1852	11,738,075	1,081,492,564	1,093,230,639	87,057,782
Total in 1853	11,165,165	1,100,405,205	1,111,570,370	109,456,404

It appears there was none exported to Ireland and the Spanish West Indies the past year. The value of the amount exported to Ireland in 1851 was $113,096, and $73,312 in 1852. The value to the Spanish West Indies in 1851 was $4,863; and to Prussia, same year, $20,820. The destination of Sea Island cotton was as follows:

	1851.	1852.	1853.
Sweden and Norway.....lbs.	.....	.....	7,993
England	6,403,553	9,478,465	8,855,890
Scotland	299,019	292,417	400,826
France on the Atlantic	1,597,084	1,429,268	1,900,456
France on the Mediterranean	.....	537,925	.....
Total.....lbs.	8,299,656	11,738,075	11,165,165

NEW AND IMPORTANT THEORIES IN AGRICULTURE.

We are indebted for the following to the American Annual of Scientific Discovery, 1854.

M. Baudrimont, professor of chemistry at the Faculty of Sciences at Bordeaux, has just published a work "On the existence of interstitial currents in arable soil, and the influence which they can exert on agriculture," in which, after a long study of the subject, he states, that there is a natural process at work by which liquid currents rise to the surface from a certain depth in the ground, and thus bring up materials that help either to maintain its fertility, or to modify its character. Many phenomena of agriculture and of vegetation have at different times been observed, which, hitherto inexplicable, are readily explained on this theory. Such, for example, the improvement which takes place in fallows; and there is reason to believe that these currents materially influence the rotation of crops.

In Germany, Schleiden is attracting much attention by his

masterly views on the phenomena of vegetation; and it will surprise many to hear that he admits of no relation between the fertility of a soil, and the quantity of fertilizing matter expended upon it. "The goodness of the soil," he says, "depends upon its inorganic constituents—so far, at least, as they are soluble in water, or through continued action of carbonic acid; and the more abundant and various these solutions, the more fruitful is the ground." Arguing from this view, it is not richness of soil or humus that produces the multiplied varieties of alpine plants in Germany, or the absence of it that produces but few. "Soluble mineral constituents" are shown to be the characteristic of our cultivated field; and "an agricultural plant" is defined as one, "distinguished from wild individuals of the same species by peculiar qualities, which constitute its fitness in culture, and which depend upon a modification of chemical action. The amazing yield of Indian corn in Mexico —from two hundred to six hundredfold—is something which, with all our skill, we cannot accomplish, and is a fact in favor of the argument, "that in no case do the organic substances contained in the ground perform any direct part of the nutrition of plants." The annual destruction of organic matter all over the earth, is estimated at one hundred and forty-five billions of pounds, equal to two and a quarter billions of cubic feet; and if all vegetation depends upon organic matter for nutrition to satisfy this consumption, "there must have been, five thousand years back, ten feet deep of pure organic substance on its surface." Another illustration is furnished by taking the number of cattle and other animals in France in a given year (1844) and observing the amount of food they consume. The process of nutrition would require 76,789,000,000 pounds of organic matter—six times more than the whole number contribute of organic matter towards the reproduction; and in one hundred years "the whole organic material of the country would be consumed!"

Again, look at a farm. How much more is carried off from it than it gives back again; generally the amount of its yield is three times greater than that of the organic matter it receives; while of the manure applied, the greater part is not taken up, but imperceptibly decomposed. Carbon is the most important of the constituents of plants. An acre of sugar plantation produces 7,500 pounds of cane, of which 1,200 pounds are carbon; and yet sugar plantations are rarely manured, and then only with the ashes of the burnt canes. With bananas the result is still more striking: the yield is 98,000 pounds of fruit in a year from a single acre; and of this 17,000

pounds—more than a fifth—is carbon; and the same acre will give the same return, year after year, for twenty or thirty years; and the ground at the end of that time will be richer than at the commencement, from nothing more than the decay of the leaves of the plant. Here in Europe, too, the difference in weight and in carbon between the seed and the produce has often been noted: in wheat, 89 per cent.; in red clover, 158 per cent.; in peas, 361 per cent. These facts afford evidence of a supply of carbon derived from other sources than those commonly supposed to exist; and while we know that seeds will germinate and become vigorous plants in pure quartzose sand, or in cotton wool, or on a board, we seem to have proof that the chief source of supply is the atmosphere. This is an interesting point, which further research will verify. Schleiken shows the process to be eminently simple. He says in his work: According to Link, Schwartz, and others, an acre of water meadow contains 4,400 pounds of hay; which, when dry, contains $4\frac{5}{8}$ per cent. of carbon. The hay then yields 2,000 pounds of carbon, to which 1,000 pounds may be added in the portion of the year in which the grass is not cut, and the roots. To produce these 3,000 pounds of carbon, 10,980 pounds of carbonic acid are requisite, which may be raised to 12,000 pounds to compensate for the nightly expiration. Now, Schubler has shown that an acre of so wretched a grass as *Poa annua*, exhaled in 120 days (the lowest computation) of active vegetation, 6,000,000 pounds of water. To supply the exigencies of the plants, therefore, it is only necessary for the meadow to imbibe $3\frac{1}{2}$ grains of carbonic acid with every pound of water.

Mr. Laws has found also, in a plant of any one of our ordinary crops, more than 200 grains of water must pass through it for a single grain of solid substance to accumulate within it. He states that an evaporation from an acre of wheat during the period of its growth, to be 114,860 gallons, or 73,510,000 gallons per square mile. With clover it is rather more; with peas and barley less. When we apply these calculations to a county or a kingdom, we are lost in the magnitude of the processes by which nature works, but we see the more clearly that on such a scale the quantity of material supplied by the air, though minute to the individual, becomes vast in the aggregate. We see, moreover, the necessity of understanding the relations between the evaporation and rate of growth, and the laws and effects of absorption in soils. A thousand pounds of dry calcareous sand will gain two pounds in weight in

twelve hours, when the air is moist, while pure agricultural clay will gain thirty-six pounds.

The source of nitron comes next to be considered; and this also is seen to be independent of manures. Hereupon it is observed, that "our domestic plants do not require a greater supply than in a state of nature. A water meadow which has never received any dung, yields from forty to fifty pounds of nitrogen, while the best ploughed land yields only about thirty-one pounds. The plants for which most dung is used, as potatoes and turnips, are in fact proportionally the poorest in nitrogen." That there is a supply independent of the soil is further seen in the millions of hides furnished every year by the cattle of the Pampas, without any diminution of produce; and in the great quantity of nitrogenous matters, hay, butter, and cheese, carried off from pasture land, far more than is returned by the animals fed thereon. Experiments with various kinds of plants, on various soils, have satisfactorily demonstrated that increase of nitrogen in the land and in the crop does take place quite irrespective of supplies of manure.

With respect to ammonia, "it appears that one-thirteenth of a grain in every pound of water is sufficient for the exigencies of vegetation, and there is perhaps no spring water in the universe which contains so little." Then as to sulphur and phosphorus, which are also among the constituents of plants, the quantity needed in proportion to the time of vegetation is so small, that one 540,000th of a grain of sulphuretted hydrogen per cubic foot, diffused through the atmosphere to a height of 3,000 feet is all that is required. The consideration that cereals would soon disappear from the north of Europe, if not cultivated, and perhaps from nearly the whole of this quarter of the globe, adds weight to the arguments in favor of enlighted attention to the inorganic constituents of plants. The point is to bring the soil into harmony with the conditions by which growth may best be promoted. Much depends on the nature of the soil; the darkest colored lands are generally the highest in temperature, hence the advantage of vegetable mould, while deep light sands and clay, which turn almost to stone in dry weather, weary and vex the cultivator by their unprofitableness. It is to be remembered, however, that soils which have the highest temperatures of their own may not be those most susceptible of receiving heat—that is, from the sun, because some lands are warmed by the springs that irrigate them. Here we have an explanation of the phenomena of certain soils, which are warm in winter and cool in summer. The application of humus evolves heat by the process of com-

bustion, and sand, lime, clay, and humus are the combinations needed, the clay being in a proportion of from forty to fifty per cent.; if less than ten per cent. the land will be too light and poor.

Schleiden, in summing up, insists strongly on the necessity of selecting good seed; that from a barren soil, he observes, is likely to be more true to its kind than from well manured land. Also, that the time for sowing should be adapted to the requirements of the plant, and it will surprise many to read that he advocates a less frequent use of the plough. He holds ploughing to be a "necessary evil, one to be employed only so far as necessity requires," because of the too frequent loosening of the soil, the decomposition of humus is so rapid as to overbalance the benefit supposed to arise from exposure to the atmosphere.

Such is a brief outline of some of the views of one who holds a high position among men of science; and though in some particulars they may seem at variance with practice in this country, there is much in them worthy the attention of intelligent cultivators.

An example to show that the application of manure to fields might be more limited:

A few years ago, the Rev. S. Smith, of Lois Weedin, in the neighborhood of Banbury, instituted a course of experiments on this very point, and with results which are singularly interesting. He took a field of four acres, having a gravelly soil, with clay, marl, and gravel as the subsoil. It had been hard worked for a hundred years; but except a thorough ploughing, no other means were taken to improve it, not a particle of manure was supplied. Wheat was then sown in single grains, three inches apart, and in rows a foot apart, a space of three feet being left quite bare between each three rows, and this was continued in alternate stripes all across the field. The sowing took place at the beginning of autumn; and in November, when the plant rows began to show, all the intervening three feet spaces were trenched by the spade, and six inches of the subsoil made to change places with the surface. "In the spring," says the reverend agriculturist, "I well hoed and hand-weeded the rows of wheat, and stirred the intervals with a one-horse scarifier three or four times, up to the very period of flowering in June." The crop looks thin and miserable until after April, when it began "to mat and tiller," it did not turn yellow in May, and the stalk grew so stout and strong as to bear up well against the storm. When harvested, the result was highly gratifying, for the yield amounted to from

thirty-six to forty bushels per acre, or rather per half acre, seeing that the alternate strips were left bare, only one-half of the field was really planted. The quantity of seed used per half acre was a little more than a half peck.

Adjoining the field in which these experiments were carried on, was another which had four ploughings, ten tons of manure, six or seven times as much seed, and yet it gave a quarter less to the acre.

This might be looked upon as an accident, were it not that Mr. Smith has repeated his experiments year after year, and always with greater success. He believes that if all the conditions be literally fulfilled, the same favorable result may invariably be obtained. No manure whatever is to be used; and in the second year the strip is to be sown which was left bare in the first; and so on, changing from one to the other, year after year.

AGRICULTURE OF TEXAS.

BY ASHBEL SMITH, ESQ.

It cannot have escaped the most careless person, that the climate of a large portion of Texas is noticeably unlike that of any region of the older States north and east of the Sabine. Nor is there found anywhere that I am aware of, unless perhaps in South America, a district of country very similar to our own. We must then learn the art of large and certain cropping at home, by trials made by ourselves;—it is not to be found in books, it is not even traditional, for it has never been acquired. Now, if every farmer had to acquire this knowledge for himself or by observation in his immediate neighborhood, his improvement would be slow in the extreme; and our progress in good farming would be comparatively very slow and irregular, if our planters have no other than those haphazard means of profiting by each other's knowledge and experience which we have hitherto enjoyed. Now, in the organization of an agricultural society, we propose at least two important objects; one to enable every agriculturist to profit by the successes and by the failures, too, of all the other farmers in the State, the other to affix a character of certainty and authenticity to the information which we trust to be able to diffuse through our organization. These I take to be our principal objects—we hope to accomplish others of scarcely less importance—such as the domiciliating among ourselves of such agricultural knowledge as may be gathered in other

States and other countries; the introduction of valuable varieties of seeds, and a just appreciation of them after trial; the introduction of really useful breeds of animals; the introduction of new and hitherto untried crops among us; the suggestion of experiments, and generally we anticipate all the advantages from our society which may be looked for from the coming together of intelligent gentlemen engaged in the same high pursuits. The grand result at which we aim is most important, the increase of the agricultural products of the State of Texas. That individual or society which shall inform us how to make two bushels of corn, two bags of cotton, two hogsheads of sugar, and so of other things, grow with the same amount of labor that is now expended on one bushel, one bag, one hogshead, will double the productive industry of the State, will double the value of every man's plantation in Texas. Most of you, gentlemen, know that the supposition just implied does not exaggerate the results that have been produced in some other countries by an enlightened, improved agriculture. Should we be too hopeful, if we anticipated as much for Texas from the intelligent gentlemen now met to lay the foundations of an agricultural society and their future coadjutors?

A great deal has been already learned within the few years since the munificently fertile regions which constitute our State have been submitted to the plow; but so little is known in comparison with what we have to learn, that we cannot speak too modestly of the state of knowledge as to farming in Texas. Cultivation here does not date further back than Austin's colony; as for the "*patches*" of the former population, it would be a thriftless prodigality of language to call the best of those patches a farm. And this very lack of information alluded to—destined we trust to be supplied by our society—ought to be for us a matter of great encouragement; it ought to make us prize still more highly the agricultural capabilities of this magnificent planting State, when those capabilities shall be fully developed.

AGRICULTURAL CAPACITIES OF CALIFORNIA.*

As a general rule, the mountains lying upon the east border of the valley Santa Clara are covered with a soil superior to that of the plains, and of much greater depth. I have measured the depths of these soils in many places, and where it is well developed have found it varying from four to eleven feet

* From the report of the State Geologist, 1854.

for miles continuous; its extreme fertility produces heavy crops of the native grains and grasses which annually contribute to its increase by their decomposition.

Although these lands are situated within the reach of the sea-breeze from the bay of San Francisco, they are protected from its cold by the slope of the hills and the modifications of its temperature acquired in its passage down the bay before reaching the northern portion of the valley. So much is the temperature increased that an addition of ten degrees is often acquired in its transit from San Francisco to the head of the valley, a distance little rising fifty miles. This increase of temperature in the air is accompanied with an increase in its capacity for moisture, hence it is usual to find a slight aqueous haze, which results from the condensation of its moisure, hanging about this entire range of hills during the summer months, and is usually seen early in the morning.

At this time and for a short time after sunrise the leaves of plants in these hills are covered with moisture, when no trace of this deposite is observable on the plains. The foreign horticulturist seems to have seized upon the natural advantages which these mountains present for the culture of the vine and other fruits, preferring these elevated situations to the lower plain lands, the climate and soil being more congenial to their growth. The altitude at which the first qualities of the grape will flourish in these mountains (Monte Diablo range) is seventeen hundred feet above the sea, the fruit produced equals that grown in lower situations; the temperature at this elevation through the night is higher than on the plains at their base, and sufficiently comfortable to sleep without shelter.

But a very few years will elapse before these "barren" mountains will yield a handsome income to the planter, and a large revenue to the State, from the taxable property that will be found in these mountains, arising from the production of the vine alone; some idea of the extent to which it is now being propagated may be obtained when it is stated that nearly two hundred thousand sets have been put into the ground during the past year, and on one ranch alone over twelve thousand new sets were placed in the ground last season, in addition to those already in bearing condition on the same farm.

The absence of timber in these mountains is one of the most serious objections to the settler. If this objection can be removed, there is no reason to doubt but that large tracts of this fertile district would command a population that would soon approximate that on the plains. It would not be diffi-

cult to produce a forest growth of trees upon these mountains, one that would prove useful as well as ornamental, conducing to health, comfort, and luxury, as well as profit. The history of the guava furnishes us with some facts on this point that are well worthy of notice. The tree is of rapid growth, spreading itself over large districts in a very few years. In Mexico it attains a height of forty feet, and grows at elevations of five thousand feet; its wood is used for fuel and many other purposes, and from its fruit the guava jelly is manufactured, and forms an extensive article of commerce.

Fifty years ago this tree was introduced at the Sandwich and Society Islands; it has in that short period of time formed one of the principal forest trees of those islands, and reaches the summit of their highest hills. A tree of this kind introduced into our timberless hills would in a short time render the barren aspect they now present more pleasing and profitable as well as useful. There can be but little doubt that this tree will flourish in this country, as it is found so to do in a climate equally cool as that in which it would be required here. Other varieties of fruit bearing trees of foreign climates will flourish in these mountains; among them may be mentioned the date, prune, and fig; and in this country we possess an advantage in the preparation of the two latter fruits for the market, which is seldom found even in countries where they flourish best, viz: a clear, dry air, or containing but a small degree of moisture, a most essential requisite in forming a good commercial article. Often the entire fruit crop is ruined in the drying process in countries where these fruits abound, (and where all conditions for their propagation are not more fully developed than in this country,) from the presence of too great a quantity of moisture in the air, a circumstance that cannot exist in this country south of the county of San Francisco.

We have the most ample proofs of the capabilities of our soils in the interior in the production of the foreign fruits. In addition to the above, the olive and the almond flourish and produce plentifully, and though the latter is not indigenous, the luxuriance with which it grows, and its plentiful production of fruit, must be received only as another evidence of the fact above stated. The value of these fruits as regards their quality suffers no deterioration from having been naturalized to our climate, but in the case of the latter named fruit it is found to be materially benefitted by the change, for as it loses none of its flavor it becomes the more valuable from its increase of size, being nearly double that of the ordinary fruit of the market.

Respecting the main body of lands on the valley and shores of the bay, but very little of which is not adapted to agricultural purposes, it may be said to cover an area little short of six hundred square miles, nearly all of which is adapted to the cultivation of the cereals and root crops. The higher table of the valley produces excellent corn, and the season, though dry, permits this crop to mature well. I observed several corn fields on the high terrace of the valley last season, flourishing well at altitudes of three hundred and sixty to four hundred and ten feet, and in localities where it would hardly be supposed, from its external appearance, that moisture sufficient to rear a blade of grass could be found. The cause of this productiveness in these localities is in a great measure attributable to the existence of a small quantity of sulphate of lime in these apparently dry soils, derived from a limestone formation in these mountains, and which extends south beyond the Almaden district. The detritus of this rock is found mingled with fragments of other rocks containing ferruginous pyrites in a decomposing state, hence the key to its appearance in this locality, and in the case before, it serves the purpose of an absorbent of moisture, thus materially facilitating the growth of crops in these sections.

UNITED STATES AGRICULTURAL INSTITUTE.

BY CHARLES L. FLEISHMAN.

In the year 1838, when the question arose how the Smithsonian fund should be most advantageously applied "to the benefit of mankind," we submitted most respectfully our views to Congress, and suggested that they might apply a small por ion—only a portion of that munificent donation—for a national agricultural school, which would have cost, land, buildings, apparatus, stock, &c., as much as has the present fanciful building, with its many towers, minarets, and loopholes, reminding the beholders of the institutions of feudal times.

We know very well that at such a school all the sons of farmers of the Union could not have been educated; but we thought it would form a central agricultural institute from which hundreds would have gone forth and built up new institutions. Some argued against the practicability of agricultural institutions, by stating that a boy from the State of Maine or Louisiana, educated in the agricultural school near Washington city, in latitude 39, could learn very little of use for his own northern or southern latitude.

Such arguments made us smile, and we asked most deferentially if two and two did not make four in latitude 39 as well as in the frigid or torrid zone; if certain rules and laws in science were not the same all the world over; and if the physician educated in Edinburgh could not cure a disease in Calcutta as well as in the mountains of Scotland. The principles of agronomy, of chemical as well as mechanical agriculture, the general rules of raising crops or animals, of the economy of farming, answer for all latitudes of the globe. Pupils could learn in such a school, north or south, east or west; they could learn to conduct a farm in any part of the United States as well as in the land of the Celestials.

An agricultural school, as we propose, requires means to establish it, and it cannot be expected that a private individual will sacrifice his fortune for the sake of his fellow-agriculturists; and for this reason it must necessarily be undertaken by the government.

It requires an extensive tract of land, many buildings, apparatus, live stock, implements, and a fund to cover the pay of the professors, &c.; and this involves a large amount of money; but never was money laid out more advantageously to any country than in an establishment of such a character. We give here the general outlines of such a plan as we consider necessary for a perfect institution. Should such a plan ever be executed, and our advice be thought useful, we are always ready to assist in carrying out one of the most important undertakings of the age:

GENERAL PLAN FOR AN AGRICULTURAL INSTITUTE.

PRINCIPAL DEPARTMENT.

This should embrace instruction in the following branches: I.—*Agronomy*, the science which treats of the different primitive earths and other substances of which the soil is composed, viz: silex, alumin, lime, magnesia, iron, vegetable matter, &c. Soils are named according to the mixture of the primitive earths, and their value results from this mixture. II.—*Agriculture*, which teaches the proper cultivation of the respective soils so as to produce the most perfect crops, is divided into two parts: 1. *Chemical agriculture*, treating of manures in general, vegetable manures, mineral manures. 2. *Mechanical agriculture*, treating of agricultural implements, modes of ploughing, cultivation of land, fencing, draining, irrigation, culture of meadows, culture of pasture lands. III.—*Vegetable productions*, referring to the culture of cereal grasses, leguminous field plants, plants cultivated for their roots, herbage plants, grasses; plants used in the arts and manufactures, such as flax, dye plants, plants producing oil, hops, tobacco, medicinal plants, &c.; the vine, the mulberry, fruit trees. IV.—*Animals used or reared by the agriculturist*, horses, mules, cattle. 1. Dairy. 2. Fattening sheep, and particularly the knowledge of wool; breeding and rearing swine, fowls, silkworms, bees. V.—*Economy, or the method of planting and conducting a farm*, treating of labor in general, labor performed by men, labor with cattle, the best mode of conducting farms, book-keeping, the laying out of a farm, the nature and quantity of manure required for a certain system of a rotation of crops, change or adoption of a system of farming, the different systems of rotations.

SECOND DEPARTMENT.

Veterinary, technological agriculture, such as making sugar, distilling, brewing, making cider, burning lime, &c., culture of forest trees, agricultural architecture, and civil engineering, as connected with agriculture.

THIRD DEPARTMENT.

Chemistry, natural philosophy, mineralogy and geology, botany and physiology of plants, zoology, meteorology, mathematical sciences, arithmetic, theoretical and practical geometry, mechanics, drawing of machines, animals, plants, and landscapes. To illustrate the sciences there should be an extensive farm, with a field for experiments, workshops, technological laboratory, apparatus for making sugar from beet or cane, for brewing, distilling, &c.; a botanical garden; a collection of the best and most approved implements, or models of them; a library; a geological collection, properly arranged according to their chemical characters, and with relation to different soils; a philosophical apparatus; a collection of skeletons of domestic animals, for the study of comparative anatomy and the veterinary art; a collection of insects; a collection of seeds; a laboratory, with apparatus for chemical experiments.

THE FARM.

The farm should contain at least six hundred and forty acres of land for cultivation, which should be divided into two equal portions, to show two different systems of rotations. First, a system which has for its object to gain as many different products as possible, and to procure the manure by stall-feeding; a system which is favorable where labor and capital is plenty, land valuable, and a ready market for the vegetable and animal products.

The second system, favorable when labor and capital are scarce, land plenty, and the object a grazing farm.

One hundred acres of *meadow*, to show how natural meadows can be improved by draining, irrigation, manuring, &c.

Two hundred or more acres *pasture land*, to show the difference between artificial and natural pasture, and the manner of improving it.

A *vineyard*, of ten acres, for the culture of the indigenous and foreign vine, and the manner of making wine.

A *hop garden*, of four acres, for the culture of the best kinds, showing the manner of taking the crop, drying, and bagging.

For *experimental fields*, forty acres, to show the culture of all plants useful in agriculture, to try new kinds, and also for experiments on manure, rotation of crops, and raising seed for distribution.

A *vegetable garden*, of ten acres, for the supply of the institution, and to show the different varieties of vegetables useful in husbandry, and the best culture of them.

A *mulberry plantation*, of six acres, which should contain all the best varieties of the mulberry, to show the culture of them, and which might serve also to supply the cocoonery with leaves.

An *orchard* and *nursery*, of twenty acres. The greatest portion of this area should be destined for a nursery, to show the manner of raising and improving fruit trees. The fruits of the orchard should supply the establishment, and show the process of making cider.

Five hundred acres of *wood-land*, to supply the establishment with fuel, and to show the culture of forest trees, the manner of burning charcoal, &c.

A *botanical garden*, of three acres, should contain all indigenous plants which might be probably useful, and which could be introduced into agriculture; also, for raising plants from seeds imported from foreign countries, the medicinal plants for husbandry, &c.

ADAPTATION OF THE SOUTH FOR FRUIT CULTURE.—NO. 3.

In planting an orchard of fruit trees, the importance of deepening the soil by trench ploughing is so obvious, that no one should think of planting without this preliminary step. Not less important, in event the land has been long cropped, is to restore to the soil the mineral manures so essential to success in fruit growing, to wit: the potash, phosphates and lime, which may have been taken up in the cultivation of corn and cotton. Chemical analysis has shown that phosphorus, and potasse, and lime, enter largely into the ash of these last named plants; and these being the mineral substances essential to the healthy growth of the peach, the pear, and the apple, it follows, or may be inferred, that any soil which will grow cotton or corn in luxuriance, will be well adapted to the growth of fruit trees. If the soil, then, is not naturally a rich one, it should be made so by the compost heap. This compost should have for its basis, muck or black mould, into which stable manure, and ashes, and dissolved or broken bones, and charcoal, should enter largely; all to be thoroughly intermixed and decomposed before putting it in the soil. My plan in preparing for an orchard has been, first, to select land that has been mellowed by root crops; next, to enclose it with so substantial a fence as effectually to exclude all domestic animals; next, to spread the compost two inches in depth over the surface of the land; next, to deepen the soil by trench ploughing, (running the plough twice in same furrows,) followed by the subsoil plough; next, to plant only home grown trees, or those from nurseries in the south, and, until the trees grow large enough to shade their own roots, to keep them well mulched with straw or leaves; and lastly, to keep the orchard in cultivation, (root crops are best,) and annually enriched with suitable manures—for a plant can no more grow and bear healthy fruit without its appropriate food than an ox or a horse can be expected to thrive without a sufficiency of corn and fodder. I deem it unnecessary to enter into minutia on this point, as the valuable almanac of Mr. Affleck (accessible to all) contains such explicit and practical directions in all that regards fruit growing, that anything I could say would be superfluous.

I will pass by the smaller fruits, the strawberry and the raspberry, so easily and successfully cultivated in the south, and take up the *pear*.

This fruit I have grown in perfection for many years—even northern and European varieties with me have borne larger fruit, and higher flavor, than in their native localities. This fruit should never be allowed to ripen upon the tree. The flavor is greatly improved by taking off the specimens when hard on the tree, and ripening them in the fruit room. I use for this purpose an inside cellar—dark, but well ventilated, and having double walls. The fruit should be sus-

pended by strings from the joists, and not placed upon shelves. In case of dampness, a few lumps of lime placed upon the floor will absorb it.

Another difficulty: The largest and heaviest pears are apt to drop from the tree, especially during a period of drought. This I have obviated, by placing barrels filled with soap suds over the roots of the tree, and allowing the liquid to escape by drops from a small orifice near the bottom of the barrel. The soap suds, and a handful of guano thrown in, will increase the size of the fruit, and keep the tree in good health during our hottest months. In regard to gathering the fruit I would observe that this is best learned by experiment. If taken off too early, the specimens will shrink and wither—if too late, they are more apt to rot, from the fact that as the fruit approaches maturity, it is more liable to be stung by insects, and all such specimens will rot before they ripen. As a general rule, it will answer to ascertain the date of ripening of the different varieties at the north, and in this latitude gather them six weeks to two months earlier.

Early Varieties.—*Madeliene.*—This pear is of French origin—bears well with me, on both quince and standard—is the earliest pear to ripen in Europe and the north—ripens here on the 15th of May in the cellar, and is in eating a week—not a specimen has rotted—flesh juicy and melting—quality very good.

Doyenne d'Ete.—With me a higher flavored pear than the Madeliene—should be gathered so soon as specimens begin to turn from green to yellow, and be ripened in the house—ripe last of May. This pear is of French origin and recently introduced.

Bloodgood.—One of the best of early pears—a slow grower on quince—should be double worked—ripens here early in June, and quality best.

Rostiezer.—An early pear of German origin—on quince a rapid grower, and bears heavily—though small in size, no early pear surpasses it in flavor—ripens with me in the cellar on the first of June.

Buerre Giffard.—One of the new European pears introduced by Mr. Affleck—from the few specimens I had this year from grafts in standard, it gives promise of the highest excellence—ripens in June, about the 10th.

Tyson.—A new Pennsylvania pear of great merit—ripens with me in the latter part of June.

Griffith's Seedling.—A native pear, which originated in the grounds of the late John T. Griffith—though small in size, it fully equals the flavor of any of the early exotic sorts—ripe the first week in June.

I have ripened a number of other early varieties described in the works on pomology, but deem the foregoing the most desirable for this region of our State.

Summer Varieties.—*Julienne.*—This pear I think a most desirable variety, either for the orchardist or for general cultivation—grows and bears better on quince than on the standard—comes early into bearing—my dwarfs, now eight years old, have born fruit for several years past—had this year to thin out, leaving about 300 specimens on each tree—will ripen in the house a month before they are ripe upon the tree—in eating during all July and early part of August—changes in fruit-cellar from green to a beautiful lemon yellow—skin waxy, shinning, and looking as if varnished—flesh melting, buttery, and delicately flavored. As the Julienne has been condemned by the congress of fruit-growers at the north as unworthy of cultivation, I requested a number of gentlemen in this county, who are good judges of fruit, to give me their opinions as to its merits—all pronounced it a pear of the highest excellence here, and some few as the best pear they had ever eaten, north or south.

Bartlett.—Grows well on either quince or standard—a profitable pear to the orchardist in the south—has the desirable quality of ripening in the cellar long before maturity upon the tree—in this locality is in eating from the middle of July to the 20th of August—in quality ranks best.

Beurre Diel.—Succeeds here on either quince or standard—an abundant bearer—had to thin out my dwarfs to one hundred and fifty specimens to a tree—the fruit attains a much larger size here than at the north, some of my specimens weighing one and a half pounds, and few less than one pound—ripens finely in the cellar, changing from green to a rich orange color—flesh rich, sugary and melting—quality best—ripe in July and August.

Duchesse d'Angouleme.—This noble pear, of French origin, in our rich, warm soil and burning climate, attains its highest perfection—grows finely on quince, and comes early into bearing. Its large size, excellent flavor and fine keeping qualities, will make it most desirable for market culture—flesh buttery, very juicy,

with a rich, agreeable flavor—ripe from the middle of July to September 15. I have taken this pear from trees toward the end of July, together with Beurre Diels, Bartletts, Beurre Bilboas and others, and carried them by steam from Natchez to New York, where they opened sound, and most of them ripe, on August 14. Although not esteemed as a dessert pear at the north, with us there are few better or more desirable pears for general cultivation.

THE DEAN COTTON.—Messrs. May, Vanhook, & Co., of New Orleans, sold there on the 12th instant a lot of fifteen bales of cotton, from the plantation of Col. John M. Burke, of Wilcox county, Alabama, at sixteen cents per pound! This cotton is the product of the Ocean and Dean seed, ginned on the Parkhurst roller gin.

As this cotton is destined to be extensively cultivated in this State, and everything relating to it is important to the planting community, we are sure Colonel Burke will pardon us for the use we make of a letter addressed to us, dated New Orleans, December 12:

"You will perceive by the Delta of this date," remarks Col. B., "that I had a lot of cotton sold yesterday for sixteen cents, in this market, the product of the Dean seed. I feel a little proud that Alabama has beaten, so far, Louisiana or Mississippi. My cotton is said by the brokers to be the finest article ever offered in this market. My entire crop is of this kind, and I have made from 500 to 2,000 pounds to the acre. The only extra expense was the investment of $300 for a Parkhurst gin, made by Frazier, of Montgomery. One bale of this yields in cash as much as two of common cotton. The staple of the Dean cotton is but little inferior to Sea Island. It fills up a vacuum between the common and Sea Island, that the manufacturing world is much in want of. One more idea: if at any time you should speak to the farming community in regard to planting this cotton, say that if picked clean of leaf it will pay well, if even ginned on a coarse saw gin. The past season I obtained fourteen cents for that passed through a saw gin."—*Mobile Tribune.*

TO PLANTERS AND FARMERS.

AGRICULTURAL INFORMATION SOLICITED.

The editor will be happy to receive contributions upon any one or more of the following points, and respectfully invites them from farmers, agriculturists, and others:

1. Improved processes of culture of any of the staples of the country, cotton, wheat, corn, tobacco, sugar, hemp, rice, potatoes, etc.,—farm and plantation management and economy, gardening, live-stock, manures, etc.

2. Action of agricultural associations and fairs, in all of the counties or States, with their reports, addresses, etc.

3. Improvements in agricultural machinery.

4. Recent agricultural publications.

Notices of plantations and farms to be sold, or exchanged, or purchased, will be inserted. As this work circulates through all the agricultural States there can be no better medium of making announcements of this kind. If such are sent to us they will be inserted prominently, in the way of advertisements, on the receipt of $5.

It is our intention to make the agricultural department very complete in everything that could commend it to the widest circulation and most general interest

Home and Foreign Commerce.

THE ISLANDS OF THE PACIFIC.

The government of the Sandwich Islands is a hereditary monarchy. It has a national legislature, consisting of two branches, the *House of Nobles* and the *Lower House*. The former consists of 25 members, including the king, Kamehameha III., his queen, and four cabinet ministers, of whom three are foreigners; the remaining members are natives. The Lower House consists of 27 members, of whom eight are foreigners.

The cabinet of ministers consists of a *Minister of the Interior*, a *Minister of Public Instruction*, a *Minister of Foreign Relations*, and a *Minister of Finance*.

The islands are divided into districts, whose bounds—often with great irregularity—radiate chiefly from the centre of the islands to the sea; subdivisions are native hamlets or villages; every *land* or locality, however insignificant, possesses its name. Communication between the districts is both by sea and land, generally the former when the roads are bad. All public conveyances are by water; and, except in the immediate vicinity of Honolulu, all land travelling is on horseback. Honolulu is the nucleus of these inter-island routes; a foreigner or native speaks of going from a distant portion of the kingdom to the capital (Honolulu) as a citizen of the United States would of visiting New York.

Between Honolulu and Lahaina, the two principal ports, 75 miles apart, packets perform trips regularly, while numerous coasters are constantly visiting other portions of the group, as freight or passage may offer. In December, 1853, a company of five persons was chartered by the Hawaiian government, under the name of "*The Hawaiian Steam Navigation Company.*" This company has the exclusive monopoly of steam navigation among the islands for ten years, provided that another steamer, of at least 350 tons burden, in addition to the one already employed, shall navigate the Hawaiian waters within twelve months from the date of the charter.

There are regular packets plying between San Francisco and Honolulu; and the annual visits of the whaling fleet afford commercial relations with the principal maritime cities of Europe and America.

The principal vegetable products of the Sandwich Islands are the sugar-cane, bread-fruit, yam, cocoa-nut, banana, plantain, the rata, (a sweet nut,) and the ahia, a pulpy fruit, shaped like an apple. Besides these, various other tropical fruits and vegetables of the temperate zone, have been introduced by the

missionaries and others. Among these are the orange, lemon, lime, fig, grape, pine-apple, cherimoya, guava, mandioca, tobacco, indigo, cotton, coffee, &c., together with a variety of esculents. The Irish potato thrives well in the Sandwich Islands, but not in the other islands of Polynesia. Indian corn has been introduced, but without much success, owing more to the imperfect tillage than to unfitness of soil. Pumpkins, melons, cucumbers, cabbages, and beans, flourish better than any other foreign vegetables.

The principal trees of the islands are the *apapa* and *faifai*, which afford excellent timber for canoes and other purposes; the *candle tree*, which produces an oil useful for light; the tamanu and the *hibiscus tiliacus*, highly valuable as timber for furniture; the Chinese paper mulberry, and the sandal tree, the timber of which last two trees is exported from the Sandwich Islands to Europe and China.

For the growth of coffee and the sugar-cane the Sandwich Islands is well adapted. The sugar-cane grows naturally in the Sandwich Islands, and succeeds better than in any other part of the world. Thousands of acres of rich land are now lying idle in these islands, which, with proper attention, would yield ample crops of either cotton, coffee, or sugar; and the peculiar richness of the soil obviates the necessity of annual manuring for years to come.

The fauna of all the Polynesian islands is characterized, like that of Australia and its surrounding islands, by the absence of beasts of prey, and, indeed, of all the larger animals. Hogs, dogs, rats, and lizards were the only quadrupeds originally found on these islands. The native hog is different from the European breed, and has now almost disappeared. The imported breed of hogs is reared in large numbers, pork being the favorite food of the natives. The Sandwich Islanders esteem the flesh of dogs a luxury. Besides hogs, there have been introduced horses, asses, cattle, goats, sheep, cats, and numerous varieties of poultry, though a species of the domestic fowl is indigenous to Polynesia. The other indigenous birds are the albatros, tropic bird, several kinds of petrels, herons and wild ducks, woodpeckers, turtle doves, pigeons, and parroquets.

Fish are numerous on the coasts and in the lagoons. The albicore, bonito, ray, and the shark are eaten by the natives. The shores abound with a great variety of delicate rock fish. The fresh water streams swarm with salmon, eels, &c.; and many varieties of molluscous crabs, &c., with turtles, are caught on the coral rocks.

At present the staple exports of the Sandwich Islands are sugar, coffee, sirop, hides, potatoes, and other vegetables, and fruits to a limited extent, together with an annual surplus of imported merchandise. These exports go chiefly to California. The following summary of the commercial statistics of the Sandwich Islands for 1853 is from official reports published in the *Polynesian:*

The value of foreign imports was $1,281,951 18; value of foreign goods re-exported, $191,397 66; value of domestic exports, $281,599 17; revenue, $326,620; disbursements, $265,795.

Total dutiable imports, $1,160,355 13; duty free, $79,402 80; entered in bond, $16,284 35; withdrawn from bond for consumption, $25,908 90, giving the total value as above.

Of the dutiable goods $587,770 29 were from the Atlantic States, and $367,149 64 from California and Oregon. From China the imports were $42,056; from Chili, $38,090; Great Britain, $20,471; Bremen, $12,225; Philippine Islands, $12,038; France, $30.

The domestic exports were as follows:

Sugar	634,955 lbs.	Salt	3,509 bbls.
Sirop	18,244 galls.	Irish potatoes	15,464 "
Molasses	58,448 "	Sweet "	8,979 "
Swine	3,724	Goat skins	5,600
Sheep	733	Tallow	16,452 lbs.
Hides	1,741	Wool	10,824 "
Fresh beef	38,000 lbs.	Cocoanuts	2,000
Salt do	13,260 "	Melons	2,500
Coffee	50,506 "		

Together with numerous other articles.

The total of custom-house receipts during 1853 were $155,640 17. Of this amount $146,964 52 were received at Honolulu, and $8,128 37 at Lahaina; the remaining $537 38 were received at the ports on the islands of Hawaii and Káuái. Of these receipts $58,114 86 were for duties on goods, $70,209 68 on spirits, and $8,261 75 for harbor dues.

The amount of oil and bone transhipped, free of duty, was as follows: Sperm oil, 175,396 gallons; whale oil, 3,787,348 gallons; bone, 2,020,264 pounds. Nearly the whole of these articles went to the United States.

The number of merchant vessels that visited these islands in 1853 was 211, of which 137 were American, with an aggregate tonnage of 45,234 tons; 17 Hawaiian, tonnage, 2,072; 32 British, tonnage, 6,185; 5 Danish, tonnage 866; 5 French, tonnage, 1,034; 3 Russian, tonnage, 1,223. During the same year there arrived at the islands 500 American, 19 French, 12 Bremen, and 4 Russian whale ships, 534 in all. The

total number of native coasters is at present 32, with a tonnage of 1,338 tons.

During the year 1853 the Hawaiian government naturalized 119 foreigners, of whom 53 were Americans. The amount received from the sales of the public lands during 1853 was $15,065. Foreigners in the Sandwich Islands can purchase lands in fee simple, which is not the case in all of the isles of Polynesia. In the Tahitian islands lands can only be obtained on a lease for a term of years.

During the year 1853 licenses for stores, hotels, coasting, peddling, &c., yielded the government $26,769. The number of marriages licensed was 1,954.

The sources and amount of the revenues of the Hawaiian government for 1853 were as follows:

Taxes, port charges, &c., &c	$129,145 83
Custom-house receipts	155,640 17
Sales of public lands	15,065 00
Licenses of all kinds	26,769 00
Total revenue	326,620 00

In 1842–'43 the revenues amounted to only $48,842; but in 1850–'51 they rose to $315,735, owing to the enormous immigration to California.

The following table shows the progress of Hawaiian commerce since 1843:

	Net imports.	Net duties.	Transit duties.	Harbor dues.	Net receipts.	Domestic exports.
1843	$156,565	$5,270	$239	$2,958	$8,468	.....
1844	289,969	8,970	411	4,881	14,263	.....
1845	471,319	19,465	734	4,890	25,189	.....
1846	536,056	31,780	220	4,705	36,506	.....
1847	653,930	44,521	184	4,095	48,801	.....
1848	572,067	52,209	264	3,094	55,568	.....
1849	622,637	66,020	235	5,687	71,934	.....
1850	989,528	91,916	443	12,644	116,190	$596,522
1851	1,751,771	125,987	1,043	12,905	148,936	309,828
1852	651,634	135,423	991	7,711	144,127	257,251
1853	1,090,553	.....	.....	8,261	155,640	275,375

The arrivals of vessels at the Sandwich Islands during the last four years were as follows:

	1850.	1851.	1852.	1853.
Merchant	469	446	235	211
Whale ships	237	135	519	535

The population of the Sandwich Islands in 1779 was estimated by Captain Cook at 400,000. In 1823 the missionaries

estimated the population at about 150,000. The following official returns of the census of 1832, 1836, 1849, and 1853 show how rapidly the natives of these islands are disappearing under the influence of modern civilization:

	1832.	1836.	1849.	1853.
Native	129,814	108,202	.....	71,019
Total	130,313	108,579	80,641	73,137

Dr. Fisher, in his *Statistical Annual* for 1854, estimates that, at this rate of decrease, the entire Hawaiian race will be extinct in 1950. He observes: "The excess of deaths over births in 1848 had been 6,465, or eight per cent. About 10,000 died of measles and whooping-cough in 1847–'48. At this rate of mortality the population in 1860 would be 32,224; in 1870, 14,073; in 1880, 6,134; in 1890, 2,667; and in 1900, only 1,162. In 1950 the Hawaiian race would be extinct. Such is the influence of civilization on aboriginal races—the same throughout America and throughout the world."

Some have questioned the accuracy of Dr. Fisher's deductions; but the above official returns show that from 1832 to 1853, a period of only twenty years, the population has fallen from 130,313 to only 73,137, a decrease of nearly fifty per cent.! At this rate the race must soon become extinct. The Sandwich Islanders have been favored, perhaps, above most heathen nations, in having had so many benefits presented to them by Christian philanthropists. They have had "the gospel preached unto them" for many long years, many thousands of dollars have been annually expended in sending them Christian teachers, in establishing schools among them, in teaching them the arts of civilized life, but what has been the result? A few have been saved, perhaps, by being christianized and half civilized; but civilization, after all, has proved to be the death of them. It has swept them away like a pestilence. The experience of the Polynesians and of the American Indians has proved that the aboriginal races, under the present philanthropic system of christianization, can no more change their habits of life, as required by present Christian systems, than the leopard can change his spots. This is not the fault of Christianity, but we conceive it to be the fault of a misconceived application of it.

From the report of the Minister of Public Instruction of the kingdom of Hawaii for 1853, it appears that in all the islands together there are 423 public free schools, with native teachers, who give instruction in the Hawaiian language; of these 344 are Protestant, and 79 Catholic. The number of scholars is 12,205, the expense of maintaining whom in 1853 was

$21,256. There are besides nine select schools or seminaries where English and the higher branches are pursued.

We have thus far briefly sketched some of the more prominent features of the ocean kingdom of Hawaii. The subject of the annexation of this kingdom to the United States is now agitating the public mind; and though nothing official has, we believe, transpired on this so much talked of event, yet from all that can be learned through the newspaper press, the action of the United States government on the subject, so far as to accede to the wishes of the Hawaiians themselves, who are the first to move in the matter, is all that is necessary to effect the annexation at once.

The great value of these islands to the United States is more in their geographical position than in the extent and quality of the territory which would be acquired. In fact, mere territory is to us no object whatever; but in view of the growing importance of our Pacific possessions, and of our commercial relations with China, Japan, and Australia, these islands become to us, and to us alone, invaluable. Between California and Asia there is no other resting place; and whether we own them or not, we are obliged to visit them, and to avail ourselves of the great advantages which they afford. If they fall into the hands of some foreign power these advantages may be wrested from us, and our commerce in the Pacific be subjected to many and serious inconveniences.

The arguments in favor of annexation are many and cogent: 1st, the Hawaiians themselves, king and all, call for annexation; 2d, by their long association with the Americans they have become, to a great extent, assimilated in feelings and principles to ourselves; they are, perhaps, as a body of people, better fitted for a republican government than the hordes of Europeans that are constantly landing upon our shores, the present Hawaiian generation having imbibed all their notions of civilization from the Americans; 3d, annexation, if now acceded to by our government, would be a peaceful and a bloodless event—one which, while it would bring immense advantages to this country, would heap countless blessings upon the islands themselves. It would complete their Americanization, and make them the brightest gems of the Pacific. A dense American population would soon occupy their fertile shores and valleys, and their plantations of sugar and coffee would soon rival those of Cuba itself. The islands once ours, capitalists would find it to their advantage to engage in the production of those great staples of the islands. Cuba itself cannot produce more coffee and sugar on the same extent of territory. The

sugar-cane, as we have before stated, is indigenous to the Sandwich Islands, which was not the case with Cuba. Nothing but capital is required to make the Sandwich Islands the greatest sugar-producing islands in the world. There are already sugar plantations there of 4,000 acres, and within the last year sugar culture there has increased nearly one hundred per cent. With the most delightful climate in the world, and a soil capable of yielding abundantly anything that grows within the tropics, these islands only need annexation to this country to make them in a few years the richest islands of their size in the world.

If, as is currently believed, the Hawaiians are now stretching out their arms to us, and asking voluntarily for annexation, we believe it the duty of our government to receive them. The acquisition would not cost our government a single dollar, while it would eventually enrich it by millions.

In collecting the materials for this article, we have, besides consulting other authorities, relied chiefly on the pages of "*Na Motu*," a most valuable and interesting work, recently published, from the pen of Edward T. Perkins. *Na Motu* is a work well worthy of the attention of those seeking information regarding the resources, social and politican condition of Polynesia.

A. W. Ely.

SILK AND THE SILK TRADE.*

The London Merchants' Magazine contains an interesting paper upon the subject from which the following is drawn:

The silk trade is one of the most important branches of our commerce, whether viewed in relation to the value of the raw material received, the beauty of the textures manufactured therefrom for dress, &c., or the number of hands it gives employment to.

The value of the raw material may be fairly estimated at £7,000,000 sterling. The number of persons directly or indirectly employed in the silk trade in Great Britain, at 1,000,000. The number of silk factories in England and Scotland, according to the latest return, was 277, employing 1,250,000 spindles and 6,092 power looms. The trade is extensively carried on at Spitalfields, within the city of London, Manchester, Macclesfield, Congleton, Sandbach, Lancaster, Leigh, Lesk, Derby, Atherstone, Nuneaton, Coventry, Norwich, Glasgow, and Paisley. The stuffs made from the thread of the silk-worm are presented to us in four different states—"raw,"

* Concluded from January number.

"thrown or spun," "waste knobs and husks," and "manufactured." The imports come chiefly into the port of London, very small quantities being brought into Liverpool and other ports. In 1852, about 500 tons in weight were received into Liverpool out of about 4,000 tons imported into the United Kingdom. We import about 5,000,000 lbs. of raw silk annually, 2,000,000 lbs. of waste knobs and husks, and 500,000 lbs. of thrown silk.

The extensive progress of our silk manufactures has caused a rapid yearly increase in the importation of the raw material. The quantity of silk annually consumed for dress, furniture, trimmings, &c., is so great, that it is really astonishing how worms and mulberry trees keep up the supply.

The Asiatic silks are the mainstay of our manufacturers, as we get very little now from the continent, as the European manufacturers engross the produce of the silk countries.

The imports of silk from the east, in the last three years, have been as follows:

		Bengal.	China.
1851	Bales,	8,768	22,532
1852	"	11,499	26,830
1853	"	9,158	32,290

Besides the above, 919 bales of Brussa silk were imported in 1851; 1,309 in 1852; and 560 in 1853.

The following is the estimate of the annual quantities of silk produced and imported in the several countries of the world:

Countries where exported.	Bales.	Countries to which imported.	Bales.
Italy imports	34,000	England	40,900
France produces	10,500	France	27,900
India imports	10,000	Prussia	9,000
Persia	7,500	Russia	8,000
China	32,300	United States	2,000
Asia Minor	3,500	Austria and Germany	8,000
Levant	3,500	Switzerland	7,000
Spain	1,500		
	102,800		102,800

The culture and manufacture of silk, like many productions of nature and art, are difficult to trace to their origin. All that we know concerning them is, that they come to us from the east in a state of comparative perfection. It seems to have been in Asia that silk was first known, and was called Sinca, from the name of the country in which it was supposed to have been discovered. The Chinese claim to have manufactured this delicate luxury as early as 2,700 years before the Christian era, at which time their attention was first attracted to the operation of the silk-worm on wild mulberry trees. It was soon after found that they thrived much better

in rooms than in the open air, and produced cocoons of much larger size and superior quality. From that period the culture of silk rapidly increased, and subsequently became a source of great wealth, and spread from China to India, Persia and Arabia, where, down to the present time, it has continued to be abundantly produced.

About the beginning of the sixth century silk culture was introduced to Constantinople; from thence it spread into Arabia, Spain and Portugal, Greece, Sicily, Italy, and other parts of Europe. It was introduced into North America, or the settlement of Virginia, but has made little progress there. According to the Census returns of 1840, the amount of silk cocoons raised in the United States was 61,553 lbs.; of 1850, 14,763 lbs. The production has greatly decreased since 1844. The imports of foreign silk into America average, £5,500,000 sterling.

Quantities and declared value of the silk and silk manufactures exported in 1851.

	Quantities.	Declared val.
Stuffs, handkerchiefs, and ribbons of silk only..... lbs.	436,201	£534,418
Stockings, dozen pairs.....	15,986	26,557
Of all other descriptions, value.....	..	194,187
Silk mixed with other materials; stuffs, handkerchiefs, and ribbons.....	748,694	347,886
Stockings, dozen pairs.....	4,971	4,651
Of all other descriptions, value.....	..	26,432
Silk, thrown.....	72,460	57,803
Silk twist and yarn.....	389,901	138,635
	*1,668,313	1,331,369

PROGRESS OF THE UNITED STATES, 1783—1855.

The area of the United States has increased from 820,628 square miles, in 1783, to 2,963,666, in 1854, being more than a third of the area of North America, and equal to the Roman empire or that of Alexander in their palmiest days; 1,217,562 miles of this territory are in the Mississippi valley, and 766,002 on the Pacific. The main shore line of the Union, including bays, sounds, &c., is 12,609 miles, of which 6,861 miles are on the Atlantic, 2,281 on the Pacific, and 3,467 on the Gulf. Of the continental shore line 907 miles are on the Atlantic, north, and 1,256 south of Virginia, (inclusive;) 1,764 are on the Gulf; 1,343 on the Pacific. The distance from New York to New Orleans is equal to that from London to Rome; from New York to Astoria by water equal to that from Liverpool to Canton, by the way of Cape Hope. The total length of shore of navigable rivers is 49,065 miles. The frontier line of the

* Assuming a dozen pairs of silk stockings to weigh one pound.

Union on the British possessions is 3,303 miles; on Mexico, 1,456 miles. Nebraska constitutes one-ninth of the Union; Texas, one-twelfth; Virginia, one-fiftieth; Rhode Island, one-two-thousand-three-hundredth. The States and Territories have about an equal area. The slaveholding States have 851,508 square miles; non-slaveholding, 612,597; 1,970,077 miles are north, and 966,089 south of latitude 36° 30′. Six States and Territories are larger, as large, or a little less than either of the powers of France, Great Britain, Austria, Prussia, Spain, or Turkey. Eight of the largest States are equal to the 23 others in territory.

The States should be classed as—1, EASTERN, or Atlantic; 2, INTERIOR, or middle; 3, WESTERN, or Pacific. The *northeastern* would then comprise New England, New York, Pennsylvania, and New Jersey; the *southeastern* the remaining Atlantic States, including Florida; the *northwestern*, Oregon and Washington; *southwestern*, California, New Mexico, and Utah; the *northern interior*, Indiana, Illinois, and Iowa, Ohio, Michigan, and Wisconsin, Nebraska, and Minnesota; the *southern interior*, Kentucky, Missouri, Arkansas, Tennessee, Alabama, Mississippi, Louisiana, Texas, Kansas, and Indian Territory. There are now 40 States and Territories.

The population of the United States was—

1701	262,000
1749	1,046,000
1775	2,803,000
1790	3,929,827
1800	5,305,925
1810	7,239,814
1820	9,638,131
1830	12,866,020
1840	17,069,453
1850	23,191,875
1854 (estimated)	26,500,000

The number of persons to the square mile in the United States in 1790, was 4.79; 1840, 9.55; 1850, 7.90: 44 per cent. of the population resided, in 1850, in the Mississippi valley and Gulf slope. This region, which had in 1790 221,711 persons, in 1850 had 10,344,746. If as dense as the southern States our territory would embrace 45,000,000; as New England, 123,000,000; as the middle States, 170,000,000; as Great Britain, 660,000,000; as Belgium, 1,150,000,000.

In 1800, 132 members represented slaveholding States in the House of Representatives, and 37 only non-slaveholding States; in 1790, there were 15 States and 1 Territory, or district; 1800, 16 States and 3 Territories; 1810, 17 States and 7 Territories; 1820, 23 States and 5 Territories; 1830, 24

States and 5 Territories; 1840, 26 States and 3 Territories; 1850, 31 States and 5 Territories; 1854, 31 States and 9 organized and unorganized Territories.

In the last ten years, the increase of white population was in the slaveholding States 34.26 per cent.; in the non-slaveholding, 39.42. The greatest increase in ten years was made in Wisconsin, which reached 891 per cent. between 1840 and 1850. The average excess of white males, at each census, over females, has been about 4 in the hundred, the females being always in excess in New England. The white males of 21 years and over in 1852 were 5,222,314; the popular vote cast, about 3,170,000. Foreign-born voters, 371,839. More than half of the whole population are under 20 years of age.

The free colored, which in 1800 had increased in New England 31.63 per cent. in 10 years, in 1850 had increased but 1.71 per cent. in the same time. The corresponding figures for the southern States were 57.33 and 12.07. In Maine, in 10 years, the increase was but 0.07 per cent. Increase of the whole colored in the slaveholding States, 27.40 per cent.; non-slaveholding, 14.38; 4,090 free colored were born in foreign countries; one-fifth of the free colored in New York were born in the present slave States. In New Orleans, one-eleventh of the free colored males were employed in pursuits requiring education. The mulattoes in the United States are one-eighth as numerous as the blacks; the free mulattoes are more than half of the free blacks. In the United States the number of Africans and their descendants is nearly 8 or 10 to 1 of those that were imported; in the British West Indies there are not 2 remaining for every 5 imported, and their descendants. About 10,000 imported Africans survive in the southern States. About 2,500,000 slaves are connected with the field work of agriculture, in every 100 of whom 2 are employed upon hemp, 5 upon rice, 6 upon sugar, 14 upon tobacco, and 73 on cotton and other products. There are 347,525 families holding slaves, or 2,000,000 persons. One-fifth of the slave properties are in a single slave, and nearly one-half in less than 5 slaves.

New York has about one-eighth of the population of the Union, Pennsylvania one-tenth, Delaware one-two-hundred-and-sixty-third part. In the last ten years Vermont gained but ten per cent., whilst Wisconsin gained 886 per cent.; in 60 years Delaware gained but 54 per cent., and Tennessee 2,701 per cent. There are about two families to every eleven free persons in the Union, and one dwelling to a little more than six persons. The average age of white persons in the Union is 23 years; of free colored, 24.54; of slaves, 21.35; and the age which equally divides each of these classes of population

is 19.15 for whites, 20.27 for free colored, and 17.02 for slaves. Not more than 20,000 persons who were in the country when the Declaration of Independence was signed can still survive. In 1850, 1 in every 709 colored persons were insane or idiotic in the non-slaveholding States, and 1 in 1821 in the slaveholding.

Connecticut, South Carolina, and Vermont have more than half as many native born residing in other States as remain at home; North Carolina, Tennessee, Kentucky, and Virginia nearly one-half; Massachusetts, Maryland, and New Jersey one-third. The largest proportion of foreigners is in Wisconsin and Minnesota, being about one-third of the whole; the least proportion is in North Carolina, being 1 to 229 native; in South Carolina, 1 in 32; in Arkansas, 1 in 98; in Mississippi, 1 in 62. More than a quarter of the free persons born in the south have left for other sections; only one-sixth have left the eastern or middle States; only one-tenth the southwest. 726,450 persons born in the free States now live in slave States; whilst 232,112 born in the slave States reside in the free. 1,800,000 foreigners reside in the free States, and less than 400,000 in the slave States.

There are in the United States 961,719 persons born in Ireland, 278,675 in England, 70,550 in Scotland, 29,868 in Wales, or in Great Britain and Ireland 1,340,812—considerably more than half of the foreign-born residents of the country; in France, 54,069; Prussia, 10,549; rest of Germany, 573,225; Austria, 946; Switzerland, 13,358; Norway, 12,678; Holland, 9,848; Sweden, 3,559; Spain, 3,113; Italy, 3,645; West Indies, 5,772; Denmark, 1,838; Belgium, 1,313; Russia, 1,414; Portugal, 1,274; China, 758; Sandwich Islands, 588; Mexico, 13,317; South America, 1,543. The number of foreigners who arrived in the United States in 1853 was 372,725; in 1854, 368,643. About 40 in the 100 Irish live in the large cities, and about 36 in the 100 Germans. 56,214 persons born in the United States reside in Canada.

If the United States increase in the next hundred years as fast as in the last sixty, the total population would be 447,159,670; if as fast as between 1840 and 1850, deducting immigrants, 252,152,290. The most moderate ratio would give in 1900 70,000,000, and in 1950 125,000,000, of whom 64,000,000 would reside in the valley of the Mississippi. The annual increase of the United States has been nearly three times as great as that of Prussia, notwithstanding what she gained from Poland, more than four times as much as Russia, six times as much as Great Britain, nine times as much as

Austria, ten times as much as France. Upon the basis of past increase, in 1950 France would have 61,000,000, and Great Britain 83,000,000.

There are 38,183 buildings used for religious worship in the United States, having accommodations for over 14,000,000 persons, and of a total value, including other property, of $87,446,331. There are about 30,000 clergymen. The Methodist have more than half of all the churches. There are about 5 churches to every 3,000 of the total population. The churches of Charleston accommodate a larger portion of the whole population than do those of Boston.

The federal government has granted over forty-eight millions acres of land for school purposes, and over four millions for universities. Maine has a larger proportion of scholars at school than any other State or country in the world. Denmark exceeds the United States; the United States exceeds all other countries, even including the slaves. Thus, there is one person at school to every 4.9 whites and free colored, and one to every 5.6 of total population; in Prussia, 1 to 6.2; in Great Britain, 1 to 10; France, 1 to 10.5; Russia, 1 to 50; Portugal, 1 to 81. In New England so admirable is the school system that only one person over twenty years of age in every four hundred of the native whites is incapable of reading and writing; in the south and southwest the proportion is 1 in 12; in the Territories, 1 in 6; in the slaveholding States, 1 in 12; in the non-slaveholding, 1 in 40; in the whole Union, 1 in 22. The proportion of the illiterate to the whole foreign born is 1 in 12.

There were in 1775 thirty-five newspapers in the United States; in 1810, 359; 1828, 852; 1840, 1,631; 1850, 2,526—circulating annually nearly five hundred millions of copies. Of the newspapers in 1850, 855 were whig, and 724 democratic. The public libraries of the United States contain near five millions of volumes.

In the slaveholding States thirteen free colored persons in every 10,000 are in jails, prisons, or penitentiaries; in the non-slaveholding 28 in every 10,000. About one-third of the paupers on the 1st June, 1850, were foreigners, although they constitute but one-tenth of the population.

There are 1,449,075 farms and plantations in the United States, averaging 203 acres each, and of the value, with implements, each $2,362; about one-thirteen of the whole area of the organized States and Territories is improved, and one-eighth more is occupied and not improved. In new England 26 acres in the hundred are improved; in the south, 16; in

the southwest, 5. About one-sixth of the national domain is occupied or in ownership. The average value of occupied land in New England is $20 27; in middle States, $28; southern States, $5 34; southwest, $6 26; northwest, $11 39; Texas, $1 44 per acre. Of a large number of cultivators taken at random 1 in 9 in Kentucky, 1 in 22 in Louisiana, 1 in 27 in Rhode Island, 1 in 56 in South Carolina, 1 in 198 in Michigan, cultivate less than ten acres each.

The value of the agricultural products of the United States in 1854 may be estimated at $1,600,000,000. Thirty-three millions acres of land are in meadows, 11 millions in wheat, 31 millions in corn, 5 millions in cotton, 2 millions in potatoes, &c.—113 millions in all crops. There are 74,000 planters, producing over 5 bales of cotton each; 2,801 sugar planters; 251 rice planters, growing over 20,000 lbs. each; 15,745 tobacco planters, raising over 3,000 lbs. each; 8,327 hemp planters.

The total capital invested in manufactures, mining, and mechanic arts in 1850 was $527,209,193; the raw material used was valued at $554,655,038; the males employed 719,-479; females, 225,512; the wages paid 229,736,377; the annual product $1,013,336,463; the per cent. profit 43.

The imports of the United States show as follows: 1821, cotton manufactures, $7,589,711; 1853, $27,731.313; wollens, 1821, $7,437,737; 1853, $27,621,911; linen, 1821, $2,564,169; 1853, $10,236,073; silk, 1821, $4,486,970; 1853, $33,048,542; coffee, 1821, $4,489,970; 1853, $15,564,590; sugar, 1821, $3,553,895; 1853, $14,993,003; tea, 1821, $1,322,636; 1853, $8,224,853; iron and steel manufactures, 1821, $1,868,529; 1853, $7,838,791. Our exports compare as follows: 1821—cotton, $20,157,484; tobacco, $5,648,962; specie, $10,478,059; flour, $4,298,043; manufactures, $2,-584,916; lumber, $1,822,077; beef, pork, catttle, and hogs, $2,052,439. In 1853 the exports of the same articles were—cotton, $109,456,404; tobacco, $11,319,319; specie, $27,486,-875; flour, 14,783,394; manufactures, $22,727,660; lumber, $4,996,014; beef, pork, &c., $8,416,878. Between 1790 and 1854 our exports to Great Britian had increased fourteen-fold, and to France, seven-fold; in the former period we consumed $5 72 to each person of foreign goods, and in the latter period, $9 92; in the former period our debt was $19 to each individual; in the latter, $2 23.

In 1828 there were 3 miles of railroads in the United States; in 1830, 41; 1840, 2,167; 1850, 7,355; 1854, 17,317 miles, and about 5,000 miles of canals. The total cost of railroads, $489,603,128; number of miles in construction, 12,526. Total

miles constructed in Great Britain, 7,686; Germany, 5,340; France, 2,480.

The value of real and personal estate in the United States in 1850, $7,066,562,966; expenditures of the several States, $24,628,666; debt of the States, $191,508,922. Estimated amount paid by each individual in the United States for every species of taxation, county, State, or federal, $3 58, against $2 55 in 1832. Estimated number of real estate holders in the Union, 1,500,000 families. In Louisiana $311,465 in real estate is owned by free blacks, and $3,958,830 by free mulattoes; in Connecticut, owned by free colored, $303,535.

The number of Indians in the United States in 1789, 76,000; 1853, 400,764, of whom 271,030 are in California, Texas, and the Territories. In 1800, 3,806 persons, exclusive of army and navy, were in federal employ; 1854, 35,456. Coinage United States mint 1800, $571,335; 1852, $57,104,569. Vessels built in the United States in 1815, 1,314, of 154,624 tons; 1852, 1,444, of 351,493 tons.

In Richmond the number of persons to a dwelling in 1850 averaged 5.2; Charleston, 5.6; Mobile, 5.8; New Orleans, 6.5: Philadelphia, 6.6; St. Louis, 7.7; Cincinnati, 8.2; Boston, 8.9; New York, 13.6. Number of persons to the acre in Mobile, 13.8; New Orleans, 45.4; Philadelphia, 80; Boston, 82; New York, 135. In 30 years, Charleston, in 1850, had increased 73 per cent.; Savannah, 102; Baltimore, 169; Philadelphia, 198; Boston, 221; New York, 316; New Orleans, 328; Louisville, 976; Cincinnati, 1,097. In about the same period Paris had increased 47 per cent.; London, 91; and Berlin, 134.

The native and foreign-born free population of some large cities is as follows: Baltimore—native, 130,491; foreign, 35,492. Boston—native, 88,948; foreign, 46,677. Charleston—native, 17,809; foreign, 4,643. Chicago—native, 13,693; foreign, 15,682. Cincinnati—native, 60,558; foreign, 54,541. New Orleans—native, 50,470; foreign, 48,601. New York—native, 277,752; foreign, 235,733, of whom 133,730 are Irish, 60,000 Germans, &c. Philadelphia—native, 286,344; foreign 121,699. Richmond—native, 15,541; foreign, 2,102.

Average age of white persons who died in the United States in 1849-'50, 25.45 years; colored, 21.39.

THE SLAVE TRADE IN NEW YORK.

We shall have something more to say upon Captain Canot's book upon the slave trade than was contained in our January number. The revelations, how-

ever, in the following, taken from the columns of the Evangelist, a religious paper published at the north, will be sufficient at this time.

It has been said that the slave trade was still carried on from New York, but as the charge has been of a vague and general character, it has attracted little attention. We are beginning to get light on the matter. There is now lying in the Tombs, in this city, a man who has been tried and found guilty of being engaged in the slave trade. This is said to be the first conviction ever obtained under the law by which it was made piracy. The testimony in the case was ample. And though he protests against his condemnation, on the ground that he is a foreigner, and not amenable to the laws of the United States, he does not deny the fact of his share in the business. He speaks of it freely, and relates with unconcealed exultation the particulars of his wild and desperate career.

We have chanced to see and talk with this noted captain in his prison. What he told us was not communicated in confidence, for he never saw us before, and did not know who we were. He spoke to us as an entire stranger. All our conversation was through the grated door of his cell. We made no attempt to gain his confidence, or to draw out the secret history of his life. He told his own story, not like a criminal making a confession, but rather with the freedom and pride of an old soldier relating his battles. Nor did he intimate a wish that what we said should be kept private. Indeed, he had boasted to others of his deeds on the African coast. His disclosures, therefore, are public property. Some of these are so curious as to be worth making known. Whether he tells the truth, the world must judge. It is not very probable that a man would make up a story which implicated him in a capital crime. Besides, his account is consistent with itself; it agrees with what was proved on the trial, and with the descriptions in Captain Canot's book. We believe, therefore, that he has let out the truth.

"New York," says Captain Smith, "is the chief port in the world for the slave trade." He repeated two or three times, "*It is the greatest place in the universe for it!* Neither in Cuba nor in the Brazils is it carried on so extensively. Ships that convey slaves to the West Indies and South America are fitted out from the United States. Now and then one sails from Philadelphia; more from Baltimore; but most of all from New York. This is our headquarters. My vessel was the brig Julia Moulton. I got her in Boston, and brought her here, and sailed from this port direct to the coast of Africa." "But

do you mean to say that this business is going on now?" "Yes, all the while. Not so many vessels have been sent out this year—perhaps not over twenty. But last year there were probably thirty-five."

"Are there large shipping-houses engaged in it?" "Yes, I can go down to South street, and go into a number of houses that help to fit out ships for the business. I don't know how far they own the vessels or receive the profits of the cargoes. I had rather not have American owners; I prefer Spaniards or Portuguese. But these houses know all about it. They know me. They see me sail out of port with a ship, and come back a passenger. They sometimes ask me, 'Captain, where is your ship?' [With a shrug.] They know what has become of her. When a cargo of slaves is landed, the vessel is often destroyed, not to be a witness against her officers and crew."

"But how do you manage to get away without exciting suspicion?" "Why, you see, we keep close, and get everything aboard, and do not ask our papers until we are just ready to sail. Then we go to the custom-house, and take out papers for Rio Janeiro, St. Helena, Cape de Verde islands, or any port you please—it don't matter where—and instantly clear."

"But if you were seized at that moment, could the officers tell, by searching the ship, that she was a slaver?"

"Oh, yes, they couldn't help knowing. Besides, they must suspect something from seeing such an almighty crew. My little brig carried but 200 tons, and could be manned by four men. But I had fourteen before the mast. The moment of leaving port is the one of danger. But we don't lose time. A steamer is kept ready, and we get under weigh immediately. Often two or three slavers leave at once. We steam down the bay, and over the bar, and then the ocean is before us, and we set our course for any quarter we please."

"But when you reach the African coast, are you not in great danger from British ships-of-war?"

"Oh, no, we don't care for the English squadron. We run up the American flag, and if they come on board all we have to do is to show our American papers, and they have no right to search us. So they growl and grumble and go off again."

"That may do very well when you are going in empty. But suppose you are coming out with a cargo of slaves on board?"

"Even then we get along well enough, if the niggers will keep quiet. We put them all below deck and nail down our hatches, and then present our papers. The officers have no right to go below. The only danger in this case is, that they will stay

on board too long. They often suspect the truth, and hang about for an hour or two. By this time the niggers are stifled, and begin to make a noise. Then the thing is out, and they seize the ship."

"After that I suppose you are punished."

"Oh, no, we generally get off. You see, as we are Americans, they must bring us to an American port to be tried. But if they run the ship into port along the coast, they get one pound a head for every recaptured slave. So they generally prefer to let us go, and get their prize-money."

"How many slaves could you carry on your vessel?" "We took on board 664. We might have stowed away 800. If she had been going to the Brazils we should have taken that number. She would carry 750 *with pleasure*. The boys and women we kept on the upper deck. But all the strong men—those giant Africans that might make us trouble—we put below on the slave deck." "Did you chain them, or put on handcuffs?" "No, never; they would die. We let them move about." "Are you very severe with them?" "We have to be pretty strict at first—for a week or so—to make them feel that we are masters. Then we lighten up for the rest of the voyage."

"How do you pack them at night?" "They lay down upon the deck, on their sides, body to body. There would not be room enough for all to lie on their backs."

"Did many die on the passage?" "Yes, I lost a good many the last cruise—more than ever before. Sometimes we find them dead when we go below in the morning. Then we throw them overboard."

"Are the profits of the trade very large?" "My brig cost $13,000 to fit her out completely. My last cargo to Cuba was worth $220,000. But it was seized by the late captain-general, Pezuela. He did more to break up the slave trade than any one else. If he had remained in office he would have stopped it altogether. But now Concha is back again, and it goes on as flourishing as ever."

"But I thought Concha was the great enemy of the slave trade." "So he is—in words. He talks a great deal, but Pezuela acted. From time immemorial, the planter's estate has been sacred. But Pezuela respected nothing. He seized the negroes wherever he could find them, even on the plantations. By this he incurred the enmity of the planters; and he would probably have been assassinated if he had not been recalled."

"Did you ever have fights with the English ships?" "Yes,

once a ship-of-war chased two of us. We knocked the sticks out of her. We didn't stop to look after the dead. At another time I was captured. It was in a dead calm, and there was no chance to get away. When I saw that we were gone, I went below and stove every cask of water but one. The other ship was short, too. So we had both to put into the land to get water. They put on board of us a lieutenant and crew. But he did not know the coast, and, as we drew towards land, he had to make me pilot, threatening, at the same time, to shoot me if I ran her on shore. I took the helm, and ran her into an inlet. No sooner had we passed the mouth than we saw on the banks the barracoons of the slave factors. They all knew me, and boats put off from shore. The lieutenant hailed them in English, and told them to keep off. At the same time I hailed them in Spanish, and told them the vessel was a prize. That night they came off in force and recaptured her. We put the lieutenant and his men into a boat, and sent them adrift, while I went down the coast and took in a cargo of slaves, and carried them safely across the ocean."

"Why, captain, this must be exciting business."

His eyes flashed fire as he replied, "It's splendid. It makes a man jump to think of it! To be cutting away at the rate of eleven knots an hour, with a ship in chase, and walking right away from her!"

That instant we saw in the prisoner the rover of the seas, again standing on his deck, with the huge hull of a ship-of-war looming above the horizon.

"But how did you get caught at last?"

"The mate betrayed me. I never liked the man. He was scared. He had no heart. You see it takes a man of a *particular constitution* to engage in our business. When once at sea with a slave cargo we are in *free bottoms*. We belong to no country. We are under the protection of no law. We must defend ourselves. A man must have a great deal of nerve in such a situation, when he is liable to be chased by ships-of-war, or perhaps finds himself suddenly in the midst of a whole fleet. The mate once served me a trick for which I should have been perfectly justified in shooting him dead. We were running in between the islands Martinique and Dominique, when suddenly there shot out from behind the land an English steamer. The mate thought it was a ship-of-war, and so did I. He was frightened to death, and instantly turned the vessel off her course. That was the very movement to bring down the enemy in chase. I saw the danger, and

flew to the helm, and put her back again, and we passed by in safety."

"But are you not tired of this business?" "Why, I didn't want to go out the last voyage. I tried to get another captain to take charge of my ship. I wanted to stay at home and get married. *But good men in our business are scarce.* And I had to go."

But the noble captain seemed ambitious of a higher career. "What I should like best of all," said he, "would be to go *privateering*. To command a merchant ship, and to go lumbering along loaded down with freight—that I cannot bear. It kills me. But give me a well-built clipper, with six guns on a side, and a long Tom in the middle, and a letter of marque to range the ocean, and I wouldn't call the President my brother!"

Such was the substance of Captain Smith's story. We allowed him to run on with his exploits to see what stuff a slaver was made of. Was there ever a more perverted nature? Here is a man whose boast is in the gigantic character and the success of his villanies. His courage is to show his power over the weak and defenceless; to crowd hundreds of human beings into a close hold, where one hundred and fifty die in a few weeks; and his greatest exultation to have defied the laws of the whole civilized world! But the most important reflection is on the weakness and negligence which permits this traffic to go on unchecked. *New York the chief port in the world for the slave trade!* Thirty-five slavers a year sailing down our bay! Is this true? If so, why are not these vessels searched and seized? On whom rests the blame? Do officers of government connive at the traffic? Or are they so blind as not to see what passes under their eyes? Or are they too weak or too indolent to enforce their country's justice?

[*Evangelist.*

TIGHT TIMES.

"The times are out of joint."

Tight Times is around again. He has been in town for a week. He may be seen on 'change every day. He is over on the pier, along Quay street, up Broadway, stalks up State street, looks in at the banks, and lounges in the hotels. He bores our merchants, and seats himself cozily in lawyers' offices. He is everywhere.

A great disturber of the public quiet, a pestilent fellow is this same Tight Times. Everybody talks about him, every-

body looks out for him, everybody hates him, and a great many hard words and no little profane epithets are bestowed upon him. Everybody would avoid him if they could, everybody would hiss him from 'change, hoot him off the pier, chase him from Quay street, hustle him out of Broadway, kick him out of the banks, throw him out of the stores, out of the hotels, but they can't. Tight Times is a bore. A burr, he will stick. Hints are thrown away on him, abuse lavished in vain, kicks, cuffs, profanity are all thrown away on him. He is impervious to them all.

An impudent fellow is Tight Times. Ask for a discount, and he looks over your shoulder, winks at the cashier, and your note is thrown out. Ask a loan of the usurers at one per cent. a month, he looks over your securities and marks two and a half. Present a bill to your debtor, Tight Times shrugs his shoulders, rolls up his eyes, and you must call again. A wife asks for a fashionable brocade, a daughter for a new bonnet, he puts in his caveat, and the brocade and bonnet are postponed.

A great depreciator of stocks is Tight Times. He steps in among the brokers and down goes Central to par, to ninety-five, ninety, eighty-five. He plays the deuce with Michigan Central, with Michigan Southern, with Hudson River, with New York and Erie. He goes along the railroads in process of construction, and the Irishmen throw down their shovels and walk away. He puts his mark upon railroad bonds, and they find no purchasers, are hissed out of market, become obsolete, absolutely dead.

A great exploder of bubbles is Tight Times. He looks into the affairs of gold companies, and they fly to pieces; into kiting banks, and they stop payment; into rickety insurance companies, and they vanish away. He walks around corner lots, draws a line across lithographic cities, and they disappear. He leaves his foot-print among mines, and the rich metal becomes dross. He breathes upon the cunningest schemes of speculation, and they burst like a torpedo.

A hard master for the poor, a cruel enemy to the laboring masses is Tight Times. He takes the mechanic from his bench, the laborer from his work, the hod-carrier from his ladder. He runs up the prices of provisions, and he runs down the wages of labor. He runs up the price of fuel, and he runs down the ability to purchase it at any price. He makes little children hungry and cry for food—cold, and cry for fire and clothing. He makes poor women sad, makes mothers weep, discourages the hearts of fathers, carries care and anxiety into

families, and sits a crouching desolation in the corner and on the hearth-stones of the poor. A hard master to the poor is Tight Times.

A curious fellow is Tight Times, full of idiosyncracies and crotchets. A cosmopolite—a wanderer too. Where he comes from nobody knows, and where he goes nobody knows. He flashes along the telegraph wires, he takes a free passage in the cars, he seats himself in the stages, or goes along the turnpikes on foot. He is a gentleman on Wall street to-day, and a back settler on the borders of civilization to-morrow. We hear of him in London, in Paris, in St. Petersburg, at Vienna, Berlin, at Constantinople, at Calcutta, in China, all over the commercial world, in every great city, in every rural district—everywhere.

There is one way to avoid being bored by this troublesome fellow, Tight Times. It is the only way for a country, a city, a town, as well as individual men to keep shut out of his presence always. Let the country that would banish him beware of extravagance, of speculation, of over-trading, of embarking in visionary schemes of aggrandizement. Let it keep out of wars, avoid internal commotions, and go right along, taking care of its own interests and husbanding its resources. Let the city that would exclude him be economical in its expenditures, indulging in no schemes of speculation, making no useless improvements, building no railroads that it cannot pay for, withholding its credit from mushroom corporations, keeping down its taxes, and going right along, taking care of its own interests and husbanding its own resources. Let the individual man who would exclude him from his domestic circle be industrious, frugal, keeping out of the whirlpool of politics, indulging no taste for office, holding up his dish when pudding falls from the clouds, laying by something when the sun shines to make up for the dark days, for

"Some days must be dark and dreary;"

working on always with a heart full of confidence in the good providence of God, and cheerful in the hope of "the good time coming."

TRANSPORTATION ACROSS THE CONTINENT TO THE PACIFIC.

Whilst the subject of a railroad to the Pacific across our territories has been dragging itself for eight or ten years through the discussions of conventions, and by fits and starts has made its appearance in Congress, to be disposed of in speeches and reports, it is said that a company in St. Louis actually propose

to cut the Gordian knot by establishing an overland stage and transportation line from Kansas to the ocean.

We have been always among the most hopeful in regard to the great enterprise of connecting the extremes of the continent by a railroad, and have taken ground in its advocacy among the very earliest, never doubting that it was in the power of Congress to render much assistance, without trenching upon its constitutional powers. Matters seeming to be as little advanced as ever in that direction, we are disposed to seize upon almost anything that has the least appearance of feasibility.

The following is the language of a St. Louis paper:

It is worth while, perhaps, to mention the important and interesting fact that for about two weeks there has been discussed in private circles in St. Louis the scheme of organizing in this city a company to open a direct trade between St. Louis and China, the isles of the Pacific, and the Pacific sea-board. The name at present suggested for this company is the one given above, the New East India Company—and it is not risking much to predict that the operations of the company, will in time, make as great an impression on the commerce of the world, and the power and the destiny of races, as its great prototype of England, now ruling so large a portion of Southern Asia. We are prepared to state that the names and influences of certain citizens are already pledged to the scheme sufficient to insure it an imposing introduction to the list of the great schemes and gigantic enterprises of modern times.

It is not necessary to go very fully into particulars at this time, in regard to this matter. Suffice it to say, that the first step proposed is a simple and practical one. It is the immediate establishment of a semi-weekly overland stage and transportation line between some point on the Missouri river—say Kansas—and the Pacific ocean—the termini, as well as the route, to be determined by the company after it is organized.

Some few calculations have been made of the cost of this preliminary operation, and it is thought that such a line of semi-weekly transit across the continent can be established and maintained a year on a capital of $500,000, with all the conveniences and personal comfort that are to be had on any great stage line in the States. It is contemplated to have permanent stations not over thirty miles apart, along the whole route, with all the conveniences of entertainment for man and beast, that will make travelling across the Rocky Mountains quite as secure and agreeable as it ever was by stage across the Alleghanies.

The sources of revenue to the company will be stage fare from persons who will like this novel mode of crossing the Rocky Mountains, mail contracts from the government, transportation of gold dust and finally of teas, silks and spices from China and Japan.

We will give our readers more of this in a day or two. Let them ponder this matter well. The day of the realization of the dream of enthusiasts since the voyage of Columbs, seeking a western road to "the East," is now fully at hand. We are the people to make plain that paradox of four centuries.

BANKING IN THE UNITED STATES.

It will be seen by the following table, that prior to 1851 the period of greatest expansion was in 1837, and of least expansion, in 1843. The increase within the last five years is astounding, and has been mostly in the northern and middle States. Under the influence of free banking over forty-four

millions of stocks are held as the basis of additional circulation, of which about four millions only are held at the south.

Increase in the bank features in all sections.

	Loans.	Stocks.	Circulation.	Specie.
Eastern States.....	$40,638,834	$691,724	$17,175,186	$1,916,586
Middle States.....	112,715,991	9,038,448	15,497,224	5,980,500
Southern States.....	12,775,736	4,335,920	4,677,162	decline.
Southwestern States..	21,597,881	1,455,097	7,490,160	2,953,744
Western States.....	5,802,187	6,441,052	4,684,224	1,025,370
Total increase....	193,530,529	21,963,341	49,523,956	10,739,205

Comparative view of the condition of the banks in the United States, according to returns nearest to January 1st in 1837, 1843, 1848, 1851, *and* 1854.

	1837.	1843.	1848.	1851.	1854.
Number of banks.....	634	577	692	781	1,059
Number of branches.....	154	114	129	148	149
Numberof banks and branches	788	691	751	879	1,208
Capital paid in.....	$290,772,091	$228,861,948	$204,883,175	$227,807,558	$301,376,081
Resources.					
Loans and discounts	525,115,702	254,544,937	344,467,562	413,759,799	607,287,426
Stocks.....	12,407,112	28,390,050	26,498,054	22,388,989	44,350,330
Real estate.....	19,064,451	22,826,807	20,580,955	20,219,724	22,367,472
Other investments.....	10,423,630	13,343,590	8,229,682	8,935,972	6,841,429
Due by other banks.....	59,663,910	20,666,264	38,904,525	50,718,015	55,516,085
Notes of other banks.....	36,533,527	13,306,617	16,427,716	17,196,083	22,659,066
Specie fund.....	5,365,500	6,578,375	10,489,822	15,841,196	25,579,253
Specie.....	37,915,340	33,515,806	46,379,765	48,671,048	59,410,253
Liabilities.					
Circulation	149,185,890	58,563,603	128,506,091	155,165,251	204,689,207
Deposits.....	127,397,185	56,168,628	103,226,177	123,967,712	188,188,744
Due to other banks.....	62,421,118	21,456,523	39,414,371	46,416,928	50,322,162
Other liabilities.....	36,560,289	7,357,033	5,501,401	6,438,327	13,459,276
Aggregate of current credits, i. e. of circulation and deposits.....	276,583,075	114,732,230	231,732,268	234,122,963	392,877,951
Aggregate of immediate liabilities, i. e. of circulation, deposits, and dues to other banks	339,004,193	136,188,754	271,146,639	330,539,891	443,200,113
Aggregate of immediate means, i. e. of specie, specie funds, notes of other banks, and sums due from other banks	139,479,277	74,067,062	112,191,928	131,926,342	168,164,657
Gold and silver in United States Treasury depositories.....			8,101,353	11,164,727	25,136,252
Total of specie in banks and Treasury depositories.....			54,471,118	59,835,775	84,546,505

Mr. Gouge, in a report to the Secretary of the Treasury for the present year, thus refers to the system of "free banks" with "deposites of stocks and mortgages for the ultimate security of their issues." "This ultimate security is, it may be admitted, better than no security at all. The mischief is, that it is least available when most wanted. The very causes which prevent the banks from redeeming their issues promptly occasion a fall in the value of the stocks and mortgages on the 'ultimate security' of which their notes have been issued."

COMMERCE, DEBT, REVENUES, &c., OF THE UNITED STATES, 1789–1853.*

Years.	Tonnage.	Imports.	Exports.	Debt.	Revenue.	Expendit's.	Populat'n.
1789–91...	502,146	$29,200,000	$19,012,041	$75,463,476	†$4,418,913	†$1,718,129	4,049,600
1792.....	564,437	31,500,000	20,753,098	77,227,924	3,661,932	1,766,077	4,173,024
1793.....	491,780	31,100,000	26,109,572	80,352,634	4,614,423	1,707,348	4,300,210
1794.....	628,817	34,600,000	33,026,283	78,427,405	5,128,432	3,500,348	4,431,272
1795.....	747,964	69,756,268	47,989,472	80,747,587	5,954,594	4,350,596	4,566,329
1796.....	831,900	81,436,164	67,064,097	83,762,172	7,137,529	2,581,980	4,705,504
1797.....	876,913	75,379,406	56,850,206	82,064,479	8,308,560	2,883,590	4,848,919
1798.....	898,328	68,551,700	61,527,097	79,228,529	7,820,575	4,623,223	4,996,705
1799.....	946,408	79,069,148	78,665,522	78,408,670	7,475,773	6,480,166	5,148,994
1800.....	972,492	91,252,768	70,971,780	82,976,294	10,777,709	7,411,369	5,305,925
1801.....	1,033,219	111,363,511	94,115,925	80,038,051	12,846,530	4,981,669	5,473,407
1802.....	892,101	76,333,339	72,483,160	80,712,632	13,668,283	8,737,079	5,646,176
1803.....	949,147	64,666,666	55,800,038	77,054,686	11,064,097	4,002,824	5,824,398
1804.....	1,042,404	85,000,000	77,699,074	86,427,121	11,826,307	4,452,858	6,008,346
1805.....	1,140,369	120,600,000	95,566,021	82,312,150	13,560,698	6,357,234	6,197,897
1806.....	1,208,735	129,410,000	101,536,963	75,723,271	15,599,931	6,080,969	6,393,584
1807.....	1,268,548	138,500,000	109,343,150	69,218,399	16,398,019	4,984,572	6,595,346
1808.....	1,242,595	56,990,000	22,430,960	65,196,318	17,060,661	6,504,338	6,803,528
1809.....	1,350,281	59,400,000	52,203,283	57,023,192	7,773,473	7,414,672	7,018,282
1810.....	1,424,783	85,400,000	66,757,970	53,173,217	9,384,214	5,311,082	7,239,814
1811.....	1,232,502	53,400,000	61,316,833	48,005,588	14,423,529	5,592,604	7,449,960
1812.....	1,269,997	77,030,000	38,527,296	45,209,738	9,801,182	17,829,498	7,666,206
1813.....	1,666,628	22,005,000	27,555,997	55,962,828	14,340,409	28,062,396	7,888,729
1814.....	1,159,209	12,965,000	6,927,441	81,487,846	11,181,625	30,127,686	8,117,710
1815.....	1,368,127	113,041,274	52,557,753	99,833,660	15,411,634	26,958,571	8,353,338
1816.....	1,372,218	147,103,000	81,920,452	127,334,934	47,408,204	28,378,492	8,595,806
1817.....	1,399,912	99,250,000	87,671,569	123,491,965	32,786,862	15,454,610	8,845,313
1818.....	1,225,184	121,750,000	93,281,133	103,466,634	21,002,563	18,808,674	9,102,060
1819.....	1,260,751	87,125,000	70,142,521	95,529,648	23,871,276	16,300,273	9,366,261
1820.....	1,280,166	74,450,000	69,691,669	91,015,566	16,779,331	13,194,530	9,638,131
1821.....	1,298,958	62,585,724	64,974,382	89,987,428	14,815,790	10,723,479	9,920,000
1822.....	1,324,969	83,241,511	72,160,281	93,546,677	19,481,961	9,827,642	10,211,348
1823.....	1,336,566	77,579,267	74,699,030	90,875,877	20,049,536	9,784,155	10,510,618
1824.....	1,389,163	80,549,007	75,986,657	90,269,778	18,908,609	15,330,145	10,818,659
1825.....	1,423,112	96,340,075	99,535,368	83,788,432	21,842,906	11,490,459	11,135,727
1826.....	1,534,191	84,974,477	77,595,322	81,054,060	24,763,845	13,062,316	11,462,088
1827.....	1,620,608	79,484,068	82,324,527	73,987,357	21,230,641	12,254,397	11,798,013
1828.....	1,741,392	88,509,824	72,264,686	67,475,044	24,843,504	12,506,041	12,143,788
1829.....	1,260,798	74,492,527	72,358,671	58,421,414	24,224,979	12,651,489	12,499,687
1830.....	1,191,776	70,876,920	73,849,508	48,565,406	24,980,888	13,220,534	12,866,020
1831.....	1,267,847	103,191,124	81,310,583	39,123,192	27,452,697	13,863,768	13,234,981
1832.....	1,439,450	101,029,266	87,176,943	24,322,235	31,107,040	16,514,088	13,614,420
1833.....	1,606,151	108,118,311	90,140,433	7,001,699	33,003,344	22,049,298	14,004,759
1834.....	1,758,907	126,521,332	104,336,973	4,760,082	21,076,774	18,420,466	14,406,350
1835.....	1,824,940	149,895,742	121,693,577	37,733	34,163,685	17,005,419	14,819,425
1836.....	1,882,103	189,980,035	128,663,040	37,513	48,288,219	29,655,244	15,244,344
1837.....	1,896,686	140,989,217	117,419,376	1,878,224	18,032,846	31,793,587	15,681,447
1838.....	1,994,640	113,717,404	108,486,616	4,857,660	19,372,984	31,578,785	16,131,087
1839.....	2,096,380	162,092,132	121,028,416	11,983,738	30,899,043	25,488,547	16,593,630
1840.....	2,180,764	107,141,519	132,085,946	5,125,078	16,993,858	23,327,772	17,069,453
1841.....	2,180,744	127,946,177	121,851,803	6,737,398	15,957,512	26,196,840	17,600,752
1842.....	2,092,391	100,162,087	104,691,584	15,028,486	19,643,967	24,361,337	18,148,589
1843.....	2,158,608	‡84,753,799	‡84,346,480	26,898,953	18,065,326	‖10,698,391	18,713,479
1844.....	2,280,095	108,435,035	111,200,046	26,143,996	28,504,519	19,960,055	19,295,971
1845.....	2,417,002	117,254,564	114,646,606	16,801,647	29,769,134	21,370,049	19,896,574
1846.....	2,562,065	121,691,797	118,488,516	24,256,495	29,499,247	26,813,290	20,515,871
1847.....	2,839,046	146,545,638	158,648,622	45,659,659	26,346,790	55,929,098	21,154,444
1848.....	3,154,042	154,998,928	154,032,151	65,804,450	35,436,750	42,811,970	21,812,893
1849.....	3,334,015	147,857,439	145,755,820	64,794,693	31,074,847	57,631,667	22,491,805
1850.....	3,535,454	178,138,318	151,898,720	64,228,258	43,375,798	43,002,168	23,191,876
1851.....	3,772,489	227,779,355	218,388,011	62,560,395	52,812,979	48,005,879	23,878,717
1852.....	4,138,441	212,613,282	209,641,625	65,131,692	49,728,386	46,007,896	24,575,604
1853.....	4,407,010	267,978,647	280,452,250	56,386,157	61,837,574	54,026,818	25,298,126
1854.....	4,802,902	304,564,381	278,241,064	47,180,506	.....	‖75,354,680	26,041,890

* "During the war of the Revolution, our commerce was suspended; after the peace in 1783, our trade continued to languish; it had to contend with domestic and foreign obstacles; foreign nations entertained a jealousy concerning these States; at home a rivalship was prevalent amongst the several members of the confederacy, and checked the prosperity of the nation. Each of the thirteen independent sovereignties contemplated its own immediate interests; some of the States declared the commercial intercourse with them to be equally free to all nations, and they cautiously avoided to lay duties on such merchandise as was subject to them, when imported into other States."

From the records of the English custom-house: Exports from America to Great Britain 1784, £749,345; imports to America from Great Britain, £3,679,467; 1785, exports £893,594, imports £2,308,028; 1786, exports £443,119, imports £1,608,465; 1787, exports £893,687, imports £2,000,111; 1788, exports £1,023,784, imports £1,886,142; 1789, exports £1,050,198, imports £2,525,298; 1790, exports £1,191,071, imports £3,491,778. † From March 4, 1789, to Dec. 31, 1791.

‡ 9 months of 1843. § 6 months of 1843. ‖ Including redemption of debt.

IMPORTS OF THE PRINCIPAL STATES FROM 1821 to 1853.*

Y'rs.	Mass.	N. York.	Penn.	Maryland.	Virginia.	S. Carolina.	Georgia.	Louisiana.
1821.	14,826,782	23,029,246	8,158,929	4,070,842	1,078,490	3,007,113	1,002,684	3,379,717
1822.	18,367,320	35,445,628	11,874,170	4,792,486	864,162	2,283,586	969,591	3,817,228
1823.	17,607,160	29,421,349	13,696,770	4,946,179	681,810	2,419,101	670,705	4,238,125
1824.	17,378,788	36,118,738	11,865,581	4,551,442	699,787	2,166,185	551,888	4,589,769
1825.	15,848,141	49,639,174	15,941,797	4,751,815	553,562	1,992,297	343,356	4,290,084
1826.	17,063,432	38,115,630	13,551,779	4,928,569	635,488	1,584,485	330,998	4,167,521
1827.	13,870,564	38,719,644	11,212,935	4,405,708	451,765	1,434,106	312,609	4,531,645
1828.	15,070,444	41,927,792	12,884,408	5,639,694	375,238	1,242,048	308,669	6,217,881
1829.	12,527,744	34,743,807	10,100,152	4,804,135	395,252	1,139,618	380,293	6,857,209
1830.	10,453,544	35,624,070	8,702,122	4,523,866	405,739	1,054,619	282,246	7,599,088
1831.	14,269,056	37,077,417	12,124,083	4,926,577	488,522	1,238,163	399,940	9,766,696
1832.	18,118,900	53,214,402	10,678,358	4,629,303	553,639	1,218,725	253,417	8,871,658
1833.	19,940,911	55,918,449	10,451,259	5,437,057	600,891	1,517,705	318,990	9,590,506
1834.	17,672,129	73,188,594	10,479,268	4,647,483	887,323	1,787,267	546,902	13,731,805
1835.	19,800,378	88,191,805	12,289,987	5,647,153	691,255	1,891,806	398,049	17,519,814
1836.	25,681,402	118,258,416	15,068,233	7,181,867	1,106,814	2,801,361	573,223	15,117,549
1837.	19,975,667	79,301,722	11,680,111	7,857,096	813,829	2,510,860	774,349	14,090,012
1838.	13,300,925	68,458,206	9,360,371	5,701,869	577,142	2,318,791	776,068	9,496,808
1839.	19,385,228	99,892,488	15,050,715	6,995,285	913,469	3,086,077	413,987	13,064,948
1840.	16,518,858	60,440,750	8,469,882	4,910,746	545,095	2,058,870	491,428	10,673,690
1841.	20,318,008	75,718,496	10,846,696	6,101,318	877,237	1,557,491	449,007	10,256,359
1842.	17,986,488	55,875,604	7,885,758	4,417,078	816,705	1,359,465	341,764	8,083,590
1843.	16,789,459	31,356,540	2,760,690	2,479,132	187,069	1,994,769	207,432	8,170,015
1844.	20,296,087	45,079,510	7,217,267	3,917,750	267,654	1,181,515	205,634	7,826,789
1845.	22,781,024	70,909,085	8,159,227	3,741,804	280,470	1,143,158	206,301	7,354,397
1846.	24,190,963	74,254,283	7,999,396	4,042,915	209,004	902,536	205,495	9,223,090
1847.	34,477,008	84,167,392	9,587,516	4,492,314	286,127	2,580,658	207,180	9,222,960
1848.	28,647,707	94,525,141	12,147,584	5,343,643	215,081	1,485,299	217,114	9,880,429
1849.	24,745,917	92,567,369	10,645,500	4,976,781	241,985	1,475,695	371,024	10,050,697
1850.	30,374,684	111,128,524	12,066,154	6,124,201	426,599	1,933,785	636,964	10,760,499
1851.	33,715,327	141,546,538	14,168,761	6,650,645	552,933	2,081,312	721,547	12,528,460
1852.	33,504,789	132,329,306	14,785,917	6,719,986	785,858	2,175,614	474,925	12,057,724
1853.	41,367,956	178,270,999	18,884,410	6,330,078	399,004	1,808,517	508,961	13,630,686

*Cannot be separated for earlier periods. The value of merchandise imported was not required by the returns made to the Treasury prior to 1821.

BRITISH AND AMERICAN TONNAGE.

TRADE OF GREAT BRITAIN AND THE UNITED STATES.

We are indebted for the facts in this statement to the United States Economist, (published by Mr. Kettell, in New York,) one of the best commercial publications in the world.

The growth of the international trade, as manifest in the tonnage of the two countries, presents some interesting features. When we look back to the operation of the navigation laws to which British naval supremacy was attributed, and compare the vast tonnage which is now employed in the international trade, we at once observe the influence of unrestricted intercourse. The following table shows the quantity of tonnage which entered Great Britain and the United States at several periods:

Tonnage of the United States and Great Britain entered in each year.

	United States.		Great Britain.	
	American.	Foreign.	British.	Foreign.
1834	1,074,670	568,052	1,996,930	648,911
1840	1,576,946	712,363	2,807,367	1,298,840
1844	1,977,438	916,992	3,087,437	1,143,896
1846	2,221,028	978,178	3,622,808	1,407,963
1847	2,101,359	1,120,346	4,238,056	1,852,096
1848	2,303,482	1,405,191	4,020,415	1,559,046

1849	2,658,321	1,710,515	4,300,375	1,680,894
1850	2,573,016	1,775,623	4,078,544	2,035,152
1851	3,054,349	1,939,091	4,388,245	2,599,988
1852	3,235,522	2,057,358	4,267,815	2,462,354
1853	4,004,013	2,277,930	4,513,207	3,284,343

During the ten years ending with 1844, the quantity of American tonnage which entered the United States in a year nearly doubled, as did the foreign tonnage which entered Great Britain. In the same period the British tonnage which entered Great Britain increased fifty per cent. It was at that period that more liberal commercial legislation came into operation, and the results are very apparent upon British shipping. The year 1847, when the navigation laws were suspended by reason of the famine that required the world's tonnage to transport a sufficiency of food, shows a great increase in the foreign tonnage entered Great Britain. Since the impulse given to trade by the gold discoveries, the American tonnage entered the United States has received a great development, and it is now double what it was in 1844, while the foreign tonnage entered the United States has increased nearly 150 per cent.

It results from the above figures that the number of ships which bear the flag that for—

"A thousand years has braved the battle and the breeze,"

has increased as much in the last twenty years as in the previous "thousand years;" certainly a very extraordinary matter for reflection. It is to be observed that the figures for England do not refer to the coasting trade, but to regular foreign commerce. In the United States, on the other hand, although the Canadian and provincial trade is, strictly speaking, foreign, it employs a coasting class of vessels, and it is these which mostly swell the figures of foreign tonnage entered the United States. The following table distinguishes the countries whence came the British and American tonnage entered the United States:

British and United States tonnage entered United States.

From—	1849		1851		1843	
	British.	U. S.	British.	U. S.	British.	U. S.
Great Britain	551,162	600,769	501,894	643,299	521,299	855,981
Canada	587,697	906,313	514,883	1,018,275	748,080	1,376,927
N. American Colonies	314,805	120,867	361,564	62,418	394,931	119,885
British West Indies	46,686	63,523	39,894	58,353	47,356	86,216
British East Indies		20,529	2,508	29,907	8,908	88,270
Australia					5,060	449
Total G. B. dependencies	1,450,350	1,712,505	1,419,847	1,807,292	1,720,584	2,469,271
All other countries	32,357	945,820	140,022	1,247,057	150,626	1,534,742
Total tons	1,482,707	2,658,321	1,559,869	3,054,349	1,871,210	4,004,013

Thus we observe that the entries of the United States tonnage from Great Britain increased, since 1851, 212,000 tons;

and British tonnage increased 20,000 tons. The British tonnage from all points has increased, and has become important from Australia. The great increase in the tonnage of both countries is from the provinces and Canada, marking the progress of that trade which has made the reciprocity treaty a necessity, and which will still closer knit the interest of both divisions of the continent.

BRITISH EXPORTS TO THE UNITED STATES.

A parliamentary return just printed gives the exports to the United States from 1847 to 1853; the quantities and declared value of British and Irish produce and manufactures exported from the United Kingdom to the United States of America in following years, of which the following articles comprise the chief:

	1847		1850		1853	
	Quantity.	Declared value. £	Quantity.	Declared value. £	Quantity.	Declared value. £
Iron, wrought and unwrought, ...tons.	187,983	1,310,225	367,864	2,385,415	654,531	5,379,753
Cotton manufactures.....yds.	165,500,000	2,305,108	101,250,000	2,128,061	196,500,000	3,607,608
Linen manufactures.....yds.	36,000,000	1,069,410	51,000,000	1,504,284	65,000,000	2,057,119
Woolen manufactures....yds.	21,500,000	1,291,551	33,000,000	1,477,818	43,000,000	1,820,798
Do. do.....pieces.	412,361	889,856	732,576	1,801,154	869,144	1,755,499
Haberdashery, &c.....		382,079	....	551,089	.....	1,319,107
Alkali soda.....cwts.	167,212	88,133	351,202	168,665	550,735	262,495
Salt.....bushels.	6,000,000	99,328	6,000,000	80,523	8,500,000	101,544
Machinery and mill-work, including steam engines.....		16,942	.....	27,319	.....	66,663
Total value of exports.....		10,974,161		14,891,961		23,658,427

The exports from Great Britain to the United States are rather more than one-fourth of the whole exports of the United Kingdom, and amount to one-half of the rated imports into the United States. As a consequence, Great Britain takes one-half of the whole exports of the United States, which take in return one-fourth of the whole exports of the results of British industry.

TAXABLE PROPERTY OF NEW ORLEANS, 1854.

Representative district.	*Real estate.*	*Negroes.*	*Capital.*	*Licenses.*
First.....	$5,614,060	$585,050	$257,600	$6,705
Second.....	7,241,380	637,900	558,175	11,295
Third.....	20,345,825	843,100	12,038,710	83,860
Fourth.....	9,443,025	425,200	2,936,950	23,825
Fifth.....	6,938,900	493,100	809,560	18,505
Sixth.....	4,301,750	529,200	507,400	7,820
Seventh.....	2,696,755	283,800	314,500	7,435
Eighth.....	2,154,150	116,400	637,900	4,797
Ninth.....	2,049,300	233,200	234,400	3,970
Tenth.....	6,806,000	362,500	193,700	7,250
Real estate.....	67,591,145	4,509,450	18,493,895	176,092
Negroes.....	4,509,450			
Capital.....	18,493,895			
	90,594,490			

State tax 16¾ cents per $100	$150,990 81
Mill tax 10 cents per $100	90,594 49
State licenses	176,092 00
Poll tax	6,975 00
Total	424,652 30

In comparing the above statement with the returns of last year, it will be observed that the increase of taxable property in the parish of Orleans is $7,006,435, viz: real estate, $1,240,885; slaves, $167,150; and capital, $5,598,400. This increase is on only nine districts; the 10th (Lafayette) is unknown.

GOLD AND SILVER IN THE UNITED STATES AT SEVERAL PERIODS.

The Secretary of the Treasury has made up a statement from the best authorities upon this point, which is certainly one of great interest.

Year.	MILLIONS OF SPECIE.			Authority.
	Circulating.	In banks.	In country—total.	
1816	$7½	$15 to 19	$22½ to 26	Crawford & Gallatin.
1819	8	29	37	Crawford.
1819	.....	15½	.....	Congressional report.
1820	.....	19½	.....	Gallatin.
1829	8½	22¾	31¼	Woodbury.
1830	10	22	32	Gallatin.
1830	8	15	23	Sanford.
1833	12	30¾	42¾	Congressional report.
1833	4	25	29	Taney.
1836	25	40	65	Woodbury.
1837	35	38	73	Woodbury.
1838	52½	35	87½	Woodbury.
	42	45	87	Hazard (Comm'l Register.)
1840	50	33	83	Woodbury,
1841	35 to 45	35	70 to 80	Gouge (Jour. of Banking.)
1844	50	50	100	Hunt (Merch'ts' Magazine)
1845	52	44	96	Bank returns and estimates.
1846	55	42	97	Do. do.
1847	85	35	120	Do. do. (Constitutional treasury began to operate.)
1848	66	46	112	Bank returns and estimates.
1849	77	43	120	Do. do.
1850	109	45	154	Do. do.
1851	138	48	186	Do. do.
1852	.....	.....	204	Estimates.
1853	.....	.....	236	Estimates.
1854	181	60	241	Bank returns and estimates.

1. That it is the power of the United States and State governments, by their combined action, to cause specie nearly to disappear from circulation. To effect this object all that is necessary is to sanction the issue of notes of small denomina-

tions, receive bank notes in public payments, and let the banks have the free use of the public funds. From 1821 to 1831, inclusive, a period in which paper money banking had the undivided support of the federal and State governments, the imports of gold and silver, though they amounted to more than seventy-six millions, were exceeded by the exports in the sum of about three millions and a half. There was, as there is every reason to believe, less gold and silver in the United States at the close of this period than there was at the beginning, though in the interim the population had greatly increased.

2. That it is the power of the United States and the State governments, by their combined action, to increase the amount of specie in the country to any amount that is desirable. About the year 1832 the United States government made some change in its policy, and while the exports of specie from 1832 to 1838, inclusive, were about thirty millions, they were exceeded by the imports in the large sum of forty-five millions.

Whenever there is an effective demand for specie, it flows in abundantly. In 1843 the amount imported was nearly twenty-three millions, and in 1847 it was still greater. If we retain permanently but a small proportion of the specie imported from foreign countries, and received from California, it is owing entirely to the excessive use of bank notes and other forms of bank credit.

N. B.—The estimates for 1854 are founded on returns of deposites at the mint and its branches, and of imports and exports, up to September 30, the returns for the last quarter of the year not having been received.

COMMERCE OF THE UNITED STATES, 1853—1854.

IMPORTS.	1853.	1854.	EXPORTS.	1853.	1854.
			Cotton.....	109,456,404	93,596,220
Specie.....	4,201,382	6,906,162	Manufactures .	22,599,930	26,179,503
			Raw produce..	1,835,264	2,602,301
Free goods....	27,182,152	26,327,660	Specie.....	23,548,535	38,062,570
Dutiable goods.	236,595,113	272,546,431	Total domestic.	213,417,697	252,047,806
			Foreign goods.	13,620,120	21,715,464
			Foreign specie.	3,938,340	3,134,730
	267,978,647	305,780,253	Total exports..	230,975,157	276,898,000

EXPORTS.

	1851.	1852.	1853.	1854.
Products of the sea.....	$3,294,691	$2,282,342	$3,279,413	$3,044,301
forest	7,847,022	7,864,220	7,915,259	11,646,571
agriculture..	24,369,210	26,378,872	33,463,573	66,900,294
tobacco	9,219,251	10,031,283	11,319,819	10,016,046

COMMERCE OF GALVESTON.

The Civilian estimates the present population of Galveston as verging upon 8,000. Six steamships connect with New Orleans and Indianola; 6 sail-ships, 16 barks, 3 brigs, 59 schooners, 11 sloops, connect regularly with northern and other coastwise ports and Europe; 14 steamboats with the interior of Texas. In the last commercial year 71 steamship arrivals, 17 sail-ships, 51 barks, 32 brigs, and 73 schooners are reported.

PRODUCE RECEIVED.

	1850.	1851.	1852.	1853.	1854.
Cotton, bales	26,255	35,394	52,794	60,892	84,173
Sugar, hogsheads	2,782	1,036	1,329	4,076	4,754
Molasses, barrels	2,427	1,990	2,576	6,086	5,298
Horned cattle	2,904	5,507	3,429	2,672	5,957
Hides	14,092	14,656	13,222	14,146	13,224
Pecans, bushels	1,525	394	5,362	13,632	13,224
Wool, (no report previous to 1854,) bales					102
Cotton rope, (in its infancy,) bales					92
Of cotton crop of 1854, exported to Europe, bales					16,139
Balance to New Orleans, New York, Philadelphia, and the North					68,034

INCREASE OF COTTON CROP.

From 1850 to 1851, (bales)	9,139	From 1852 to 1853, (bales)	8,098
From 1851 to 1852, ...do	17,400	From 1853 to 1854, ...do	23,281
Aggregate increase in four years			57,918
Average annual increase in four years			14,479

COMMERCE OF MOBILE IN 1853 AND 1854.

Export of cotton to foreign ports in 1854, 336,963 bales, against 345,930 bales in 1853: value, in 1853, $16,198,442, in 1854, $14,676,342. Of the exports in 1854, 231,230 bales were to Britain, 76,752 to France, 8,538 to Spain, and 20,443 to other foreign ports.

RECAPITULATION FOR THE LAST FIVE YEARS.

	1853-'54	1852-'53	1851-'52	1850-'51	1849-'50
Great Britain	232,730	237,292	306,002	249,897	162,219
France	76,752	87,824	97,753	45,460	39,968
Other foreign ports	28,981	20,814	27,091	26,420	11,977
Total foreign	336,963	345,930	430,846	321,777	214,164
United States ports	178,668	195,271	143,804	114,451	128,872
Total	515,631	541,201	574,650	436,228	343,046

In 1854, 25,980 barrels of whiskey were imported into Mobile, 168,732 sacks of salt, 8,970 hogsheads of sugar, 13,975 barrels of pork, 16,483 kegs of lard, 26,075 bales of hay, 186,292 sacks of corn, 55,870 sacks of oats, 21,907 bags of coffee, 17,791 hogsheads of bacon, 24,186 coils of rope, and 23,450 pieces of bagging.

Foreign imports into Mobile in 1854, $795,653. Receipts of cotton by Alabama river, 254,990 bales, by Tombigee 214,445, by Black Warrior 62,191, by wagons, railroad, &c., 7,058. Stock on hand and on shipboard 31st August, 1854, 29,278.

Exports of lumber in the same period, 12,606,805 feet, of which 4,263 were to the West Indies, 5,465,692 to Texas, and over 1,000,000 to Philadelphia, etc.

COMMERCE OF BALTIMORE, 1853 AND 1854.

GRAIN AND GUANO.

RECEIPTS OF GRAIN.—The receipts of grain show in the gross an increase as compared with 1853—the figures being for 1853, 8,275,459 bushels, and for 1854, 8,351,659 bushels. This excess is caused by the large receipts of corn and oats;

the receipts of wheat falling below those of 1853. The following is the comparative receipts of grain at Baltimore for the four years past:

	1851.	1852.	1853.	1854.
Wheat	2,600,000	3,451,150	3,411,965	2,523,559
Corn	2,650,000	3,745,900	3,906,494	4,641,100
Oats	450,000	800,000	780,000	1,004,000
Rye	150,000	165,000	160,000	176,000
Peas	15,000	10,000	13,000	7,000
Beans	3,000	5,000	4,000	1,000
Total	5,868,000	8,177,050	8,275,459	8,351,659

The foreign and coastwise exports of corn show an increase this year over those of 1850 of about 700,000 bushels, but those of wheat have fallen off upwards of 300,000 bushels since last year.

THE GUANO TRADE.—The very extensive increase in the use of guano as a fertilizer of the earth has caused the trade in it to become exceedingly important. The number of vessels arrived at the port of Baltimore the past year loaded with guano was 135, mostly ships of the largest class. Assuming the freight paid to those from Peru to be an average of $28 per ton, the freight money alone amounts to $1,625,000. The whole value of guano imported from Peru, at $50 per ton, is $3,150,000, and that from other ports, at $25 per ton, is over $255,000, making the value of the guano imported into Baltimore the past year nearly three and a half millions of dollars. It is to be remarked that the largest import of guano has been into Baltimore, and without coreect data, it is assumed that the quantity imported equals that of all the other cities in the Union. At the close of the year the supply on hand is very large, being computed to be about 40,000 tons, or about half the whole import of the year. The market in the spring will therefore open with a stock sufficient to meet almost any demand, but in the mean time supplies are not expected to continue as freely as heretofore, as it is understood that but few vessels have been chartered to proceed to the islands within the past three months. We subjoin the import for the past year and for several years previous:

Imports of Guano for 1854.—Peruvian, 58,927; Mexican, 6,614; African, 627; total, 69,168 tons.

Imports of Peruvian guano into Balttmore for six years.—1849, 2,700 tons; 1850, 6,800; 1851, 25,000; 1852, 52,500; 1853, 32,152; 1854, 68,727.

THE SOUTHERN COMMERCIAL CONVENTION.

The third session of this convention was held on the eighth of January at New Orleans, but the full report of its proceedings do not reach us in time for the present issue of the Review. Having given the full report of each previous session we shall not be unmindful of this. Such bodies have done much for the advancement of the south, and we trust to see them continued in all of our great cities. They give an impulse to public opinion, and are almost sure to keep it in the right direction.

Over one hundred delegates attended the New Orleans meeting, which was organized by Mayor Lewis. General Lamar, of Texas, was afterwards elected president. The railroad to the Pacific was a primary object of attention. Albert Pike, of Arkansas, ably discussed the subject.

Resolutions were offered calling upon Congress for an appropriation to aid in the construction of a railroad across the Peninsula of Florida, and asking liberal appropriations from the States bordering on the Atlantic and the Gulf, for the same purpose; also favoring a material modification of the tariff, and recommending the southern members of Congress to vote for an entire abolition of the duties on railroad iron; also, requesting the establishment of a navy yard at Memphis.

ERRATUM—*Tonnage of the United States.*—Since the appearance of the official report of the tonnage of the United States for 1854, we find that the total at the close of the year may be estimated at 5,000,000 tons, instead of 5,600,000, as given in two places in the January number. We followed, in that number, a statement made by one of the Washington letter writers for a leading commercial journal, and perceive that he was in error. The official statement will appear in our next.

Mining, Manufactures, and Internal Improvements.

GOLD.

The gold regions of the United States are two: the "Appalachian gold field," and the California, or "Sierra Nevada gold field." Gold in the Appalachian mountains is first mentioned in Jefferson's Notes on Virginia. It was first obtained in North Carolina in any considerable quantity. The precise date of its first discovery is unknown. In 1799 a lump described as of the size "of a small smoothing-iron," was found in North Carolina. About 100 pounds of gold had been found in that State up to the year 1830. The first native gold of this country was coined at the United States mint in 1825, and up to 1830 four-fifths of our gold coin was from native metal. From 1804 to 1827 North Carolina had furnished all the gold produced in this country, amounting to $110,000. In 1829, Virginia furnished $2,500 worth, and South Carolina $3,500—the first from these States. In 1830, Georgia made her first deposite, to the amount of $212,000. There were then some six or seven thousand persons engaged in gold-washing in that State. North Carolina had nine different *placers;* and in South Carolina about 200 persons were engaged in the business, but with small success. In 1838, gold was considered so abundant in the southern States, that the government established three mints for the coinage of bullion, one in North Carolina, one in Georgia, and one in New Orleans.

The production of gold in the Appalachian field attained its maximum in the period from 1828 to 1845, and then declined rapidly till 1853. In 1836 four gold mines were worked in Virginia, but the yield was small. In South Carolina, in 1848, there were eleven mines, but they only produced about $50,000 annually. Virginia, from 1830 up to the present time, has produced from $50,000 to $100,000 worth of gold annually. Some of the most promising mines in the State have recently been purchased by English companies, who will soon test their capabilities. The results of the speculation are not yet known. There are now eleven mines in operation in the State. North Carolina is still considered to be the richest in gold mines. Several new companies have recently been organized. The Gold Hill mines of North Carolina are the richest in the Atlantic States. A New York company, with a capital of $1,000,000, is now working them. They have been sunk to the depth of 340 feet, and the auriferous quartz is found to be richer and more abundant the deeper they go. These

mines have yielded $1,500,000 since 1843. There are nine mining companies now in the State.

Gold mining in *South Carolina* was almost entirely abandoned, until the richness of the Dorn mine was discovered, in 1852. It is owned by a single individual, and is said to be the richest gold mine in the Atlantic States. Some of the best ore is worth $2,000 per bushel; at this mine a yield of $5 per 100 pounds is thought to be a poor one. Up to 1853 an amount equal to $300,000 is said to have been taken from an excavation a little over 300 feet long, 12 deep, and 15 wide. The richness of the mine is now thought to be declining.

Georgia produced $500,000 worth of gold annually until 1853, when the amount had declined to $58,896. Some of the abandoned mines have been recently resumed.

Tennessee and *Alabama* have yielded a few thousand dollars worth of gold annually for the last 20 years, but the prospects for the future are poor.

New Mexico is probably rich in gold. Near Santa Fé there are two *placers* which have yielded from $30,000 to $250,000 per annum, when worked. But little is known, as yet, of the mineral wealth of New Mexico, but it is believed to be considerable.

Of *California* we need not speak, for it is of wide-world renown—a perfect El Dorado, such as even fable has scarcely been able to describe. There even the most extravagant dreams of hidden treasures have been realized. The discovery of the gold mines of California is to be ranked among the great events of the 19th century. Its influence upon the march of civilization has been so great, that we may say that it is the last link added to the chain connecting America with Asia; it has led directly to the opening of Japan. The moment it was known that, in California, unlimited quantities of gold could be had for the mere digging, thousands flocked thither by land and sea, and the whole world was bent on California.

The existence of gold in California was long known to the Jesuit fathers, before the Mexican war. A mine was worked near the mission of San Fernando, by a Frenchman named Baric, in 1843; and specimens of gold-bearing quartz were brought from California more than 30 years ago. But it required the eyes of an Anglo-American to see how long and broad the California mines were; Spanish eyes had been wandering over the country some 200 years without seeing anything remarkable.

The year 1848 is memorable in the annals of gold digging; for in that year it was that a few inquisitive Americans, in the month of February, caught the first glimpse, on the Sacramento, near Sutter's Fort, of the as yet untold treasures of California gold. They had just dug a mill-race for letting the water of the American river upon the wheel of a new saw-mill. The first water that flowed through exposed to their eyes the glittering dust. They endeavored to keep the secret, but in vain; the entire population of San Francisco, then only a few hundreds, Governor Mason and all, rushed headlong to the "diggings." All California was aroused, and when Governor Mason arrived, he found the diggings a place of the utmost excitement. All California was there, to the number of some 4,000, and they were taking out the gold at the rate of from $30,000 to $40,000 worth per day! From February to the next November, after the discovery, they had taken out from $4,000,000 to $5,000,000. Single individuals averaged from five to ten ounces per day, and often as many pounds.

On the arrival of the news in the Atlantic States, of these wonderful gatherings of gold, the tide of emigration to California was overwhelming; and, at the end of 1849, less than two years after the discovery, the 4,000 diggers had increased to 50,000 Americans and 5,000 foreigners.

During the years 1848 and 1849, $40,000,000 were obtained from the washings.

California, with all its miners, exhibits, as yet, no symptoms of exhaustion. It still holds the first rank among the gold-producing countries of the globe. How much gold California has thus far produced will be seen from the following table, which shows the quantity of gold that has been deposited in the United States mint, and all its branches, by California and all the other States, since the earliest discoveries of gold in North America:*

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* General Rafael Espinosa, governor of Lower California, has recently discovered rich gold and silver mines near San José, Lower California. One silver mine of immense richness is spoken of, the mouth of which was closely covered with decayed wood, showing that it had been worked at some remote period. Near the mine stands an old dilapidated house, the walls of which are ornamented with specimens of antique painting in Indian colors, and inside the walls is a huge tree, towering in solitary majesty. A coal mine of uncommon richness has recently been discovered this side of Cape St. Lucas. The discoverer is taking steps to secure it from the Mexican government, when he proposes to form a company for the purpose of working it. It is within eight days sail of San Francisco, and near a good landing.

Years.	Virginia.	North Carolina	South Carolina.	Georgia.	Tennessee.	Total for each year.
1804-'23	.....	$47,000	.....	.....	.....	$47,000
1824	.....	5,000	.....	.....	.....	5,000
1825	.....	17,000	.....	.....	.....	17,000
1826	.....	20,000	.....	.....	.....	20,000
1827	.....	21,000	.....	.....	.....	21,000
1828	.....	46,000	.....	.....	.....	46,000
1829	$2,500	134,000	$3,500	.....	.....	140,000
1830	24,000	204,000	26,000	$212,000	.....	466,000
1831	26,000	294,000	22,000	176,000	$1,000	520,000
1832	34,000	458,000	45,000	140,000	1,000	678,000
1833	104,000	475,000	66,000	216,000	7,000	868,000
1834	62,000	380,000	38,000	415,000	3,000	898,000
1835	60,400	263,500	42,000	319,900	100	698,500
1836	62,000	148,100	55,200	201,400	300	467,000
1837	52,100	116,900	29,400	83,600	.....	282,000
1838	55,000	.....	.....	.....	.....	435,100
1839	57,600	.....	.....	.....	.....	404,208
1840	38,995	.....	.....	.....	.....	426,185
1841	25,736	.....	.....	.....	.....	542,117
1842	42,163	2,899,505	406,044	3,582,033	50,446	777,097
1843	48,148	.....	.....	.....	.....	1,045,445
1844	40,595	.....	.....	.....	.....	967,200
1845	86,783	.....	.....	.....	.....	1,019,281
1846	55,538	.....	.....	.....	.....	1,129,357
1847	67,736	.....	.....	.....	.....	889,085
1848	57,886	473,543	40,577	257,063	7,161	896,675
1849	129,382	485,793	24,564	236,349	5,180	7,079,144
1850	65,991	355,523	19,459	209,587	1,507	36,938,314
1851	69,052	326,883	41,052	157,213	2,377	56,540,612
1852	83,626	403,295	126,982	96,542	750	54,506,963
1853	52,200	275,622	99,317	58,896	149	55,622,051
	1,403,431	7,848,664	1,085,491	6,361,583	79,970	224,392,334
1854, 3 m'ths	4,631	62,332	8,044	4,167	.....	11,111,098

The following amounts are included in the total: *Alabama*—$155,107 from 1837 to 1847; 1848, $14,462; 1849, $10,700; 1850, $6,538; 1851, $3,962; 1852, $254; total, $191,023. *New Mexico*—1848, $682; 1849, $32,889; 1850, $5,392; 1851, $890; 1852, $814; 1853, 3,632; total, $44,299. *Oregon*—1853, $13,535; first three months of 1854, $445. *California*—1848, $45,301; 1849, $6,151,360; 1850, $36,273,097; 1851, $55,938,232; 1852, $53,794,700; 1853, $55,113,487; total, $207,316,177; first quarter of 1854, $11,031,479. There were also received, from miscellaneous sources, in the whole period at the mint $48,161.

From the preceding table it will be seen that up to the beginning of 1854 there had been deposited in the United States mints the following amounts:

From the Atlantic States	$16,970,162
New Mexico, Oregon, and various sources	105,995
California	207,316,177
	224,392,334

The actual *manifested* shipments of gold from California fall short of the above two hundred and seven millions by

$3,500,000, which is the amount carried away by passengers in small and large sums.

The following table, which we find in Mr. Whitney's *Metallic Wealth of the United States*, is an approximation to the grand total of the gold produced by California up to the beginning of 1854, most of the items being from actual returns:

Deposited in United States Mint and branches up to Dec. 31, 1853.	$207,316,177
Shipments to foreign ports in 1848, 1849, and 1850, (estimated)...	10,000,000
Taken out of the country by foreign miners, chiefly Mexicans, in 1848 and 1849, (estimated).....	10,000,000
Shipped to Europe in 1851.....	3,392,760
Shipped to South American ports in 1851.....	2,372,000
Shipped to Europe in 1852.....	6,000,000
Shipped to South America and Asiatic ports in 1854.....	1,000,000
Shipped to England in 1853.....	5,000,000
Shipped to other ports in 1853.....	1,600,000
In circulation in California, *in transitu*, and otherwise absorbed, (estimated).....	13,319,063
	260,000,000

This enormous sum of gold was produced by the mines of California between 1848 and 1853, inclusive, as follows:

		lbs. troy.
In 1848,	$5,000,000, representing of pure gold.....	20,150
1849,	20,000,000.....do.....do..do.....	80,600
1850,	45,000,000.....do.....do..do.....	181,400
1851,	65,000,000.....do.....do..do.....	262,000
1852,	62,500,000.....do.....do..do.....	252,000
1853,	62,500,000.....do.....do..do.....	252,000
	260,000,000	1,048,150

Having in the preceding pages given a brief sketch of the gold regions of the United States and the amount of their production, we now proceed to glance at the principal gold regions of other countries:

The gold mines of *Russia* are chiefly on the eastern slope of the Ural mountains, in the eastern part of Siberia, and in the Caucasus. The western slope of the Ural yield but little. Formerly, gold was found in the region about Archangel, but these mines have not been worked since the commencement of the present century. The gold mines of the Ural and of eastern Siberia have acquired, during the last twelve or fifteen years, great importance. The mines of eastern Siberia are by far superior to those in the Ural, the amount of gold found in the latter being to that of the former as 1 to 6. The Ural gold region extends over a surface thus far unknown, new mines being constantly discovered. Gold was first discovered in these mountains in 1774, but the exploitation of the mines assumed no importance until 1819. The greatest amount of gold is obtained from the washings of the

sands, the yield of which is very small ordinarily, 128,000 parts of sand giving only one part gold.

From 1823 to 1839 the gold mines of the Ural mountains produced 432 Russian pounds weight of gold, equal to 389.92 pounds avoirdupois. The total value of the gold produced by all the mines of Russia from 1819 to 1848, inclusive, was 223,900,000 roubles of silver, equal to $167,925,000. Their production in 1848 was 21,637,300 roubles of silver, equal to $16,227,975.* Up to 1850 the Ural gold washings have yielded only 932,270 pounds troy of gold. The government first commenced their exploitation in 1814. The Russian gold mines are thought now to be on the decline.

In *England* and *Ireland* gold is found in many places in very small quantities. The Romans mined extensively for gold in Wales, but not with much success. In the reign of James V. several hundred men were employed in washing the sands of Dumfriesshire for gold, but with what success we are not informed. Gold is still found in small quantities in the tin mines of Cornwall, where it has been observed for hundreds of years.

Some years ago a lump of gold weighing 22 ounces was found in the Wicklow mountains of Ireland, which created an immense excitement. A gold mining company was immediately formed, and a large capital wasted in endeavoring to find the *lodes* in which the precious metal originated.

Previous to the year 1853 the entire amount of gold produced by Great Britain did not exceed four ounces per annum. Since 1853 the appearance in England of a work entitled "*The Gold Rocks of Great Britain and Ireland*," by John Calvert, filled with the most extraordinary stories of golden treasures existing in England, Ireland, and Scotland, has created an extraordinary excitement among the English on the subject; but it does not appear that any of Mr. Calvert's golden dreams have as yet been realized. Great Britain is decidedly poor in gold mines.

The same may be said of *Germany*. Some of its gold mines have been worked ever since the days of the Romans. The principal mines are in Transylvania, Hungary, Salzburg, Tyrol, Styria, and Bohemia. The entire production in 1820 was 2,682 pounds; in 1848, 5,645 pounds, and the yield for 1854 is estimated at 6,000 pounds.

In *France* the sands of the Rhine continue to be washed for gold, but only on a small scale. Formerly the yield was very

* *Etudes sur les Forces Productives de la Russie*, par M. L. de Tegoborski, vol. 1, pp. 278-294. This work is official.

considerable. In 1846 the gold washings of France yielded only about $9,000. There is no gold, in fact, found in France worth mentioning. The poorest spot in California is richer in gold than all France.

Spain, in ancient time, if we may believe Diodorus, Pliny,* Strabo, and other ancient writers, was immensely rich in gold. It was found both in the solid rock and in the sands of the rivers—in those of the Tagus and Douro. In the time of Pliny, A. D. 23, Spain was the richest gold country known. Gallacia and the Asturias yielded 20,000 of gold annually. From Pliny's account of mining operations, it appears that in those remote times, 1800 years ago, not only were the ancients well versed in smelting, but that the arts of *cupelling* and *amalgamating* were fully understood and practiced. Diodorus and Pliny speak of these arts as being then of the most ancient origin.

The gold mining operations of the ancients in Spain extended over a large surface, as may be seen at the present day. The places worked seem to have been thoroughly exhausted; but Spain still contains gold in considerable quantities, though the amount produced is small. If Spanish industry at the present day was equal to that of the Romans, gold would undoubtedly be produced by them in large quantities. The sands of their rivers still produce gold, but the washings are confined to the river Sil and Salor, which yield only about $8,000 per annum.

Italy contains gold; and mines which were worked in the time of Pliny still continue to yield gold. The sands of the Po still contain gold. The principal gold operations of Italy are at present carried on in Piedmont and Savoy. The gold mines of the province of Ossola, still worked, must have been very rich in ancient times; for Pliny informs us that the Roman Senate forbid over 5,000 slaves being employed in them lest the price of gold should be reduced by the large quantity produced. In 1829 these mines yielded only 250 pounds troy. A French company has recently commenced working a gold mine near Genoa.

In *Central Asia* gold is found in various localities. In 1851 the Russians established gold washings in the Caucasus. The sands of the rivers of this region were washed for gold long before the Christian era. Thibet is also supposed to be rich in gold. The rivers of the western portion of that country are

* Metallis, plumbi, ferri, aeris, argenti, auri tota ferme Hispania scatet.—*C. Plinii Secundi*, Hist. Mundi, lib. iii. 4.

especially referred to as abounding in auriferous sands. They are estimated to yield about 10,000 ounces annually.

Southern Asia, that is, Asia south of the Himalayan chain of mountains, in ancient times, yielded vast amounts of gold. By many the Ophir of Solomon is thought to have been somewhere in Southern Asia. Gold is still found in many localities in India. The washings of the Burrampooter are estimated to yield from 30,000 to 40,000 ounces annually. Many of the streams of the Burman empire produce gold. Ava produces about 2,000 pounds annually. The Malayan peninsula is represented as rich in gold.

In *China* and *Japan* there is much gold, though we have no very reliable statistics of the amount of their production. The Japanese government forbids the exportation of gold. The gold-bearing formations of Siberia enter into China, but they are little worked by the Chinese, the government having suspened mining operations "in order to preserve the balance of circulation." This fact, whatever may be thought of Chinese political economy, shows that these mines are capable of producing abundantly.

Borneo has extensive gold washings. About 5,000 Chinese are engaged in the washings of the western coast; and according to Mr. Brooke, the Rajah of Sarawak, the annual production is $5,000,000. The other East India islands also produce considerable quantities of gold. Gold dust is very abundant in *Sumatra*, and is an article of considerable traffic.

The whole product of Southern Asia, including the East India islands, is estimated at from 25,000 to 30,000 pounds annually.

Africa, according to the accounts of all travellers who have penetrated to the interior, is rich in gold. Owing to the climate chiefly, all attempts to engage in mining operations have proved disastrous. The gold washings of Nubia, Senegambia, and Bambuk, are important. According to Russegger, who travelled through Nubia in 1838, the great chain of mountains which traverse the interior of Africa from ENE. to WSW., contains large amounts of gold of a remarkably yellow color, and of a very pure quality. The annual production of Africa at the present time is about 4,000 pounds. The next El Dorado will probably be in Africa.

Australia, as all know, is now second only to California as a gold-bearing country. The discovery of gold in Australia illustrates the value of geological science. Mr. Murchison, in examining the Australian cordillera, in the southeastern corner of Australia, discovered such a remarkable resemblance

between the geological position and mineralogical character of the rocks of the Australian and Uralian cordilleras, that he predicted the discovery of gold in Australia. Cornish miners immediately began to "prospect," and gold was discovered. Mr. Murchison, soon after his geological surveys, wrote to Earl Grey on the subject of encouraging the search for gold in Australia; but the earl "took no steps whatever to promote the discovery of gold, on the ground that the production of this metal would interfere with *sheep-growing!*" We think that Earl Grey must have felt a little *sheepish* after reading the following facetious remark in the Quarterly Review: "We were quite unprepared," says the Review, "for such pastoral predilection in the colonial office under Lord Grey's presidency. To realize Arcady in New South Wales, and convert convicts into Strephons, might be a very amiable conception, but would hardly justify the minister of a great commercial empire—and, above all, a zealot of *Free Trade*—in an attempt to *cushion* rich sources of mineral wealth opened in a colony under the watch of his intelligence."*

While Earl Grey was dreaming of sheep-growing, a Mr. Smith applied to the government for a reward for the discovery of certain auriferous deposits, which he agreed to point out as soon as the reward was paid; but while Mr. Smith was awaiting the movements of the government, a "returned Californian," named Hargroves, found gold on the Macquairie river, a piece weighing 13 ounces having been dug up. Without asking for a reward, Hargroves informed the government of his discovery, and then there was a general rush for the second California.

Earl Grey now forgot his sheep-growing, and the government began to stir in the matter, by laying claim to the gold region, granting licenses to dig for £1 10*s.* per month. It also instituted a geological commission to explore the country.

The Australian gold region extends over a space of at least nine degrees of latitude, and occupies a breadth of 50 miles or more.

The discovery of gold in Australia was first announced in May, 1851. In December of that year 12,000 persons were digging for gold at the Mount Alexander gold field. A shepherd discovered a block of quartz lying upon the surface, from which 60 pounds of gold were taken. Nearly all the gold of Australia is obtained from washings, all of the quartz-mining companies, without exception, having failed. The quartz veins

* Quarterly Review, XCI, 511.

are found not to be rich in gold; and investigations made in London with regard to the quartz-gold mining companies of Australia, seem to indicate that they are mostly swindling concerns.

The auriferous deposites of Australia are similar to those of California. The gold is remarkably fine, and contains from three to seven per cent. of silver. The total amount of pure gold produced by Australia, since the first discovery up to the beginning of 1854, is estimated by Mr. J. D. Whitney, after a careful examination of all the returns and estimates, to be as follows:

	lbs. troy.
1851 (year of discovery)	30,000
1852	330,000
1853	210,000
Total since discovery	570,000

South America has never been a great gold producing country; whilst its silver mines, ever since the discovery of America, have poured forth an unparalleled stream of wealth. In 1800, according to Humboldt, it produced 691,625 lbs. of silver, and only 33,524 lbs. of gold, of which 9,900 lbs. came from Brazil. In 1850 South America produced only 24,000 lbs. of gold. The countries yielding gold in South America are New Genada, Venezuela, Brazil, Bolivia, and Peru. The total amount produced by New Grenada since 1804 is estimated at $204,085,328. The principal mines are in the provinces of Antioquia and Veraguas. New Grenada produces annually about 13,276 lbs., and Brazil about 6,000 lbs. The total amount of gold produced by New Grenada, from the earliest mining operations up to 1841, is $376,500,000; and the total amount produced by Brazil up to 1845, is 3,576,192 lbs. troy.

Mexico yields gold in scarcely any other way than as a constituent of its argentiferous ores, which yield a very important per centage of gold. M. Duport estimates that per centage, for 1840, at one-eighth in value. There is probably much gold in Mexico which will not be discovered until the Anglo-Americans get possession of that country—an event not far distant.

Central America, according to Mr. Squier, and other travellers, is rich in gold; but we have no statistics on the subject.

COAL MINING IN THE UNITED STATES.

The following statistics were collected from the census of 1850 for the speech of Mr. Walbridge, of New York, delivered

during the present session of Congress. There is no doubt that the aggregate coal product of the United States in 1855 reaches to ten or twelve millions of tons against a little over five millions returned for 1850. In the report of the jurors of the London World's Fair, the coal product of Great Britain for 1850 is set down at 34,750,000 tons, of the value, at 5 shillings 6 pence the ton, £9,701,050. In the same year the iron product is stated at 2,250,000 tons, at 48 shillings, £5,400,000. Thus coal and iron alone reached in value about $70,000,000 in 1850.

States.	Establishments.	Capital invested.	Material used.	Males employed.	Females employed.	Quantities produced.	Values.
Alabama	8	6,835	$1,529	58	2	26,250 bush	$12,747
Arkansas	1	130	500	2	....	1,700 "	500
Illinois	6	109,500	.....	68	....	9,545,000 "	65,585
Indiana	1	800	1,000	40	....	300,000 "	21,000
Iowa	1	2,000	.....	4	....	10,000 "	4,000
Kentucky	44	146,000	2,931	451	....	2,162,000 "	163,285
Maryland	8	635,000	.....	210	...	196,000 tons	274,560
Missouri	34	29,890	250	250	....	2,716,060 bush	219,098
Ohio	124	337,175	450	1,187	....	14,186,187 "	720,126
Pennsylvania	246	5,818,721	225,279	11,758	....	3,590,808 tons	5,268,351
Rhode Island	1	80,000	2,500	40	....	10,000 "	22,500
Virginia	33	1,729,650	12,875	1,044	4	6,141,000 bush	407,408
Total	507	8,340,701	246,814	15,097	6	35,068,197 bush 3,796,808 tons	7,239,110
Total in tons	.....	.....	.....	.....	....	5,049,954	.....

THE MINES AND MINERALS OF GREAT BRITAIN, NO. 1.

Brass.

Although a compound metal, consisting of an alloy of copper and zinc, may be here adverted to, amongst other metallic produce. The value of our exports of copper and brass manufactures is about a million and three-quaters sterling. Equal portions of brass and copper form *bronze*. To render brass more soft and pliable, a small proportion of lead is added to it.

Lead.

The next important mineral for our consideration is lead, of of which we have about 230 mines. The lead ore, or galena, raised in the United Kingdom, has averaged lately about 75,000 tons annually; in 1845 it was 79,000 tons, from which

55,000 tons of lead were smelted. In 1849, 85,716 tons of ore, producing 58,727 tons of lead. The production is now 60,000 tons, and throughout Europe about 130,000 tons. The export of pig and sheet lead is about 22,000 tons, of which more than half is foreign lead. A rich ore of lead has, it is reported, been discovered in Van Diemen's Land. There are some valuable lead mines in the United States, principally in the new western districts, on the Upper Mississippi. Lead mines are now worked in eight States; the principle deposits are in Wisconsin, Illinois, (the Galena district,) and Missouri. Missouri could, if required, supply the whole world with lead, and as much as 80 per cent. is obtained from the ore. The United States used to import about ten million pounds of lead a few years ago; she now exports largely, and undersells us in China for the casing of tea chests. In the Austrian empire a large quantity is raised, especially in Carinthia and Bohemia. We have no very late returns at hand; but in 1842 the production consisted of 20,630 cwt. of lead ore, 72,028 of pig lead, 10,686 of mill lead, and 23,200 of litharge. A good deal is raised in Nassau. The lead mines of Spain, which, in 1780, only produced 16,000 cwt., now yield 250,000 cwt.

Lead usually contains a considerable proportion of silver, seven or eight ounces to the ton being about the average in this country; but in the mines in the north of England the proportion is about one half-more.

Plumbago.

Plumbago, to the value of £4,000, was shipped from Ceylon in 1850, the exports being 10,412 cwt.; but the exports had increased to 31,126 cwt. in 1851. It is found in India, South Australia, and the Cape Colony. An extensive deposit has recently been discovered at Williamsport, in the State of Maryland. It is found also at Marmora, in western Canada.

The great value of the Borrowdale mines, Cumberland, producing the best, black lead for pencils, is well known. The inferior sort of black lead is employed in the composition of crucibles, in polishing iron and stoves, and as a substitute for grease or oil in diminishing the friction of various machinery.

Tin.

Formerly tin plates—sheets of iron dipped into molten tin—were in extensive demand, and the ores of this metal, which is limited in its range of locality, were much sought after. Zinc, when rolled into thin plates, is now fast taking the place of tin and even of lead. Our own Cornish mines, and those

of the island of Barca, furnish the chief quantities of tin used. The annual average import of Barca tin is 21,000 cwt.; and our 118 tin mines in Cornwall and Devon produce about 7,000 tons. The tin imported from Malacca, yearly, is about 1,650 tons, of which one-fourth is from the East India Company's territory. The chief mine is at Cassang, giving employment to 3,500 men. The mines are generally excavated in the swampy flats at the base of hills, from six to twenty feet deep, following the streams of ore, which run to the distance of two or three miles. There are six or seven tin mines in France, and some in Bohemia.

We export annually about 12,000 cwt. of British tin, and the same quantity of foreign, the united value of the exports being £500,000 sterling.

Platinum.

This rare and hard metal, which is heavier, and was formerly dearer than gold, is of great importance to the chemist for its useful properties in withstanding the action of concentrated acids. Until recently we derived our sole supply from the Brazilian and Peruvian mines; for, although produced in Russia, its export was for a long time prohibited. In the Mining Museum of St Petersburg there is a block of native platinum weighing nearly two tons. Iridium, rhodium, and palladium, are usually found associated with platinum.

Quicksilver.

This metal, so extensively employed in medicine, in the amalgamation of the noble metals, water-gilding, the making of vermilion, the silvering of looking glasses, the filling of barometer and thermometer tubes, &c., was at one time chiefly obtained from Spain, (the mines of La Mancha being celebrated,) from Germany and Peru. We now obtain supplies from China. Instead of coming thence in the usual iron bottles, the package is simply a joint of the bamboo cane, about a foot long and three inches thick, each end of which is firmly closed with rosin. The importation of this metal is falling off rapidly. In 1849, we imported 2,682,592 lbs., in 1850, 355,079 lbs., and in 1851, the amount was even less. A newly discovered mine at New Almaden, in Upper California, yields the metal in great abundance, and can probably produce a million and a half pounds annually. The discovery of quicksilver in California will be of great advantage to the mining commerce of the South American republics, as it can be delivered at a reduction of one third in price. Upwards of 700,000 lbs., were

exported to South America from this country in 1849, the whole exports being a million and a quarter pounds. Mercury is obtained from cinnabar, which is a bisulphuret of the metal.

Zinc.

The ores of zinc are now of much importance, and the preparations of this metal in its pure or combined state are in extensive use, and deservedly held in estimation for different purposes of utility. It is used as a substitute for white lead, as well as for cisterns, roofing, &c. A lode of zinc, recently examined in a mine on the Canning river, western Australia, yielded 66½ per cent. on assay, while the best English ores, such as that of Allowhead, in Northumberland, contains no more than 59 per cent. The imports in 1852 amounted to 19,293 tons, whilst the exports, chiefly to the East Indies, were 5,948 tons.

Prussia is one of the chief countries for the production of zinc, having raised in some years nearly 40,000 tons of this mineral. Belgium comes next, yielding about 18,000 tons, and Austria furnishes a small quantity.

Antimony

is of considerable use in medicine and the arts. It is employed to impart hardness to the softer metals, for printing types, small shot, &c. It is found in Germany, France, Spain, the East Indies, America, England, &c. There were 46 mines of it worked in France a few years ago.

Cobalt.

The cobalt ores of Tunnburg, in Sweden are of great purity, although the quantity raised is not large. There are also mines of this mineral at Modun, in Norway, and some in Austria, about 2,500 cwt. being produced there. This substance is chiefly used as a color for glass and porcelain; when roasted it forms a black powder, which, combined with vitreous substances, forms the valuable blue dye known as smalt. The smalts are used for clear starching linen. The ores of cobalt usually contain arsenic.

Nickel

is chiefly extracted from the ores of cobalt. It readily forms an alloy with very many of the metals, and in the compound with copper and zinc is well known under the popular name of "German silver." It is found chiefly in Germany, but is also met with in France, Hungary and England.

Manganese.

Manganese ore is in great demand for its various uses in the arts and manufactures; upwards of 40,000 tons being annually employed in great Britain. It is used in the form of oxide for extracting chlorine, in the manufacture of soda from common salt, for bleaching powder, for correcting the yellow color in making glass, for giving the black enamel or glaze to pottery ware, and also occasionally as a sulphuret, to give a brown color in calico printing. The largest quantity of manganese is produced in the duchy of Nassau, where about 20,000 tons are raised annually, and shipped to all parts of the world. 1,200 persons are there employed in the mines and washing mills. It is found in Germany, Ireland, British America, Italy, and France, and also in considerable quantities in Devon and Cornwall.

Arsenic

is of great value in dyeing and printing, glass-making and other manufactures. It is, therefore, not exclusively a minister of evil, for it is employed in medicine, and the sulphuret of arsenic is a valuable pigment. 887 cwt. was produced in Austria in 1842.

Among the other substances coming within the range of this branch of our essay, are artificial cement and stucco, prepared from gypsum; artificial manures, such as coprolites and phosphatic fossils, superphosphate of lime, bone-dust, and normal guano; gypsum and quartz, steaschist or refractory stone for the building of melting furnaces; bituminous shale with its products, peat and its products, and various kinds of compressed coal and artificial fuel; asphaltum stone and earth, and melted for paint. Steatite or earthstone, (French chalk,) useful for removing stains of oil, grease, &c., from silk, cloth, and other fabrics, is found in large masses on the seashore about Donegal. Granite is becoming of increasing value.

The value of gypsum, pounded, as a manure, has made this product a matter of some importance, and in the United States and British North America the demand for it is on the increase. It is known there by the name of plaster. Nova Scotia abounds with it, 47,000 tons, valued at about £6,400, having been exported in 1848. It is found in large quantities, and of excellant quality, on the Grand or Ouse River, Canada. It is also met with in large quantities in many parts of England, and about 1,000 tons reach Liverpool annually for the use of glass manufacturers.

We may here allude to **Jet**, which is distinguished by its

splendid black lustre, and enters so largely into commerce for the manufacture of ornaments for ladies, snuff boxes, &c. It is obtained in this country chiefly from the cliffs about Whitby and Scarborough, where it gives employment to about 200 persons in the collection. The best quality fetches 10*s*. or 12*s*. the pound in its rough state, and the value of the raw material obtained is stated to be about £16,000. It is found in Germany, and in Italy, the Asturias, &c.

EMERY is found in various parts of Europe, particularly in Turkey, Germany, Italy, and Estremadura in Spain, but it is chiefly imported from the islands of Naxos in the Grecian Archipelago. It is employed to polish hard stones, glass, steel, &c.

COST OF CALIFORNIA GOLD.

It has been customary for some time for a certain class of writers to compute the cost of California, and weigh it in the same balance with the mineral results that have been derived, thus demonstrating by their figures a greater loss than gain. One of the most ingenious and plausible of these arguments is contained in the following extract. The answer is ready enough, that California has absorbed surplus labor, and that the time which is lost in its transit would have in part been lost in any case. The expense of transportation, too, has fostered and sustained other branches of industry as do the travelling expenses of men of business or of pleasure. The argument against California is like that which for a long time was brought against Louisiana. We find such an argument in an old file of the *Constitutionalist*, published in Delaware, of the date February 12, 1805, and will give it in the miscellaneous department of the present number of the *Review*.

We are not in possession of the statistics requisite to determine with exactness the number of persons who have been taken from the old States and have gone to California. The population of that State now exceeds two hundred thousand. But as there is a constant stream of people always *in transitu*, either going to or leaving that country, the number of people withdrawn from the business of productive labor largely exceeds the population of that State. It is not our purpose to over-estimate the amount of labor that has been withdrawn from the old States, but we feel satisfied that it will be under rather than over the mark, to say that from 1849 to 1854, each year inclusive, there has been an average of 150,000 persons who have been during that time either in California or on their way going or returning. The time is six years for 150,000 persons, or one year for 900,000 persons.

Now, if we estimate the average value of this labor at $25 per month each, or $300 per year, we have ($270,000,000) two hundred and seventy millions of dollars as the value of the labor taken from the eastern side of the Rocky Mountains and placed on its western side. In addition to this, it cost on an average $200 per head as the expenses of the removal from one country to the other. This

makes ($180,000,000) one hundred and eighty millions of dollars as the cost of removal. The sums together make the sum total of ($450,000,000) four hundred and fifty millions of dollars drained from the eastern side of the United States. To ascertain the amount of the gold obtained from that country we propose to take the gold coinage of the mint. This coinage was in—

1849	$9,007,761
1850	31,981,738
1851	62,614,492
1852	56,846,187
1853	46,998,945
1854, estimated	42,000,000
Total coinage	249,349,123

As these figures make the sum total of *all* the gold coined at the mint, and a portion of it is known to have been obtained from other sources than California, the credit will rather be in excess than too small; but still we propose to add to this amount twenty millions more as an allowance for unminted gold sold to workers in jewelry and plate, and which has been consumed in the arts. The statement will then stand thus:

California, Dr.	
To labor and outfits	$450,000,000
Credit by product of gold coin and nature	269,349,233
Dr. balance	180,650,877

This shows that there is a balance due us in lost labor and capital of over one hundred and eighty millions of dollars.

So far as California is concerned, it is probable that this deficiency is replaced there by the value of property, real and personal, which the labor taken from this region of country has produced there.

COAL FIELDS OF ARKANSAS.

John R. Howard, of Paducah, is authority for the following:

These fields, as discovered, begin about forty miles above little Rock, near or at the Arkansas river, as I was informed, somewhere about Johnson county, and, in *that part* of Arkansas, extend over some counties and fractions of counties. But these discoveries I take to be only a portion of the great coal field of Arkansas, and perhaps only a small portion—the northern and northwestern rim or side of the coal basin.

Again, I see from the papers, recently, that rich and extensive mines of fine coal have been discovered about and not far from Camden, in the southern and southeastern part of Arkansas; and when in that country—in Union county—about two years since, I was informed, on reliable authority, that mines of coal had been found below Camden, and, perhaps, in Union. This is the lower side or rim of the basin.

From these facts and data, we can see somewhat the shape, extent, and direction of this great coal field; that it begins above Little Rock, where the discoveries have been made of which I have spoken, then makes a deep dip south and southeast, under the Little Rock and Hot Spring regions and the country between, and then appears again, or "crops out" above Camden, where the late discoveries have been made. This I judge to be the shape and extent of the basin. And I think it very probable that, at a great depth below Little Rock—perhaps two hundred feet or more—there are rich beds of coal, and which the sinking of a shaft would show. The character of the country about Little Rock and Hot Springs indicate the existence of coal, I think, below the surface of the country. From the former to the latter place it is of a slaty character nearly all the way. The slate is everywhere "cropping out" on the hillsides and slopes, and to be seen in the bottoms of the streams; and at Little Rock is an extensive valley of as fine slate as I ever saw anywhere, and which is said to extend some forty or fifty miles in a southwesterly direction. It is, no doubt, this which I crossed on my way from that place to the Hot Springs.

THE PACIFIC RAILROAD.

General Rusk, of Texas, who has ever taken such an active and distinguished part in the promotion of this great measure of the age, and to whom, if it is carried out, the country will be perhaps as much indebted as to any other living man, has matured a bill in the Senate which embraces many wise features, and seems to be altogether free from constitutional difficulties. It will become in a few days a subject of discussion, and will, we sincerely trust, be the means of consummating an enterprise so worthy of the country and the age. No other plan that has been suggested compares with it in practicability, and we do not believe another can be carried through for many years to come unless upon a similar basis. Meanwhile the country demands the road.

General Rusk has studied the subject in every point of view, and carefully weighed each section of his bill. The blank relating to issue of government bonds he proposes to fill with a sum the interest of which at six per cent. will amount to $300 per mile for the mail pay, besides a reasonable estimate for the transportation of troops. This he thinks will furnish $10,000 per mile to the road. The number of miles finished annually to be 50 or 100. The bonds to run 50 years, &c.

By the first section it is made the duty of the Secretaries of War and Navy and the Postmaster General, or any two of them, to advertise for proposals for carrying the mails, troops, seamen, military and naval stores, munitions of war, funds, etc., of the United States daily from a point on the Mississippi to San Francisco, or some other point on or near to the Pacific, for the term of ——— years from the time of commencement of said service, upon a first class railroad, constructed by the contractors according to a plan approved by the said secretaries, etc.

The second section prescribes the time and manner of deciding upon proposals, etc.

The third and fourth sections are as follows:

SEC. 3. *And be it further enacted*, That at the time of entering into any contract under this act, it shall be the duty of the party or parties whose proposal shall have been accepted, to deposite with the Secretary of the Treasury the sum of———dollars, or the value thereof, in bonds or certificates of stock of the United States, at par, which may be subsequently drawn out by them, as the work proceeds, in sums of not less than————thousand dollars, on the production of vouchers showing satisfactorily to said Secretary that an amount equal thereto has been applied in good faith to the construction of the said road.

SEC. 4. *And be it further enacted*, That any contract entered into as above shall provide that at least fifty miles of the said road shall be finished and put into full operation within the space of two years from the date thereof, and that not less than———miles shall be finished, equipped, and put into full operation within each year thereafter until the whole shall have been completed, unless some unforeseen casualty shall, in the opinion of the Secretaries and Postmaster General aforesaid, or any two of them, entitle the contractor or contractors to an extension of the time.

Section fifth provides that in case of failure a contract shall be made with new parties, and the work already finished appraised and held subject to the disposition of government.

Sections sixth to twelfth are as follows:

SEC. 6. *And be it further enacted*, That it shall be the duty of the person or persons, or body corporate, whose proposal shall have been accepted at any reletting of the contract, to deposite with the Secretary of the Treasury an amount in bonds or certificates of stock of the United States, at their par value, equal to that deposited by the previous contractor or contractors; and also issue his or their bonds in favor of the previous contractor or contractors for the amount at which the portion of the road already completed and equipped shall have been appraised, after deducting therefrom any advances made thereon by the government in bonds and public lands, or in any other manner, the bonds so issued to be made payable in —— years, and to bear interest at the rate of —— per cent. per annum, to be paid out of the nett profits of the road, after deducting at the rate of twelve and a half per cent. per annum as dividends upon the investment of the last contractor or contractors.

SEC. 7. *And be it further enacted*, That so soon as one hundred miles of the said road shall have been completed and put into full operation, the contractor or contractors therefor shall be entitled to receive ——— dollars in bonds of the United States, redeemable in ——— years, and bearing interest at the rate of six per centum per annum, payable at the treasury of the United States semi-annually, and warrants for six sections for each mile of road so finished, to be located alternately, as near as practicable, to the line of the said road, and a similar amount for each additional hundred miles until the whole shall have been completed.

SEC. 8. *And be it further enacted*, That any contract which shall be made under this act shall contain a stipulation that all branch or lateral roads shall be permitted to connect therewith, and that the freight and passengers from said roads shall be transported thereon at the rates and charges demanded for other freights and passengers, which shall at no time exceed the average amount demanded on other first-class railroads in the United States; added thereto the incidental charges for receiving and transporting the said passengers and property at the point of junction.

SEC. 9. *And be it further enacted*, That the said contract shall contain a stipulation requiring the contractor or contractors to keep the said road in good order and full operation at all times; and that, whenever the government of the United States may require the use of the said road for the transportation of troops, seamen, or freight, it shall at all times have the preference; but whenever the number of persons so transported shall exceed ———, or the amount of freight ——— tons in any one year, any excess shall be paid for at such rates as Congress may by law direct.

SEC. 10. *And be it further enacted*, That said contract shall further require the contractor or contractors to keep a regular account of the receipts and expenditures, copies of which, under oath, shall be filed with the Secretary of the Treasury on or before the first Monday of November of each year, which accounts shall exhibit the amount received from all sources, as well as the amount expended, and shall conform to such instructions in detail as may be given by the Secretary of the Treasury, with a view to enable the public, at all times, to know the extent of operations and condition of the said road.

SEC. 11. *And be it further enacted*, That the Secretaries and Postmaster General aforesaid, or any two of them, may, at any time, for the purpose of ascertaining the condition and progress of the said road, appoint an engineer or other suitable person or persons to examine the same thoroughly and report to them.

By the twelfth section the right of way for 300 feet through the public lands is granted, together with lands necessary for embankments, turn-outs, and depots, timber, earth, and other necessary material contained.

SEC. 13. *And be it further enacted*, That at the date of the maturity of the bonds provided to be issued by the United States, the States through which the road may pass shall be entitled to the portions of the road lying within their respective limits by paying up and surrendering to the United States such portion of the said bonds as may have been issued upon the portions of the road within the limits of these States respectively, and paying to the company owning such road a fair price for the running stock, to be ascertained by appraisement: *Provided*, said State shall provide by law that the mails, troops, seamen, military and naval stores, munitions of war, funds, and other property of the United States, shall be forever transported on the said road at such rates of compensation as Congress may by law direct.

SEC. 14. *And be it further enacted*, That, should any or all of the States through which said road may pass decline to take said road on the terms prescribed, then the owners of the said road shall hold so much of the same as may not have been taken by the States, free from all claims on the part of the United States, on payment by said owners of the principal of the bonds issued therefor and the surrender of them to the United States; and upon their entering into a contract to carry the mails on the terms set forth in the foregoing section; but upon their failure to do so, it shall be the duty of the Secretaries and Postmaster aforesaid, or any two of them, to cause possession to be taken of the said road or portions thereof not previously taken by the States or contractor or contractors, and all of its or their equipments and appurtenances for the purpose of selling the same, in order to pay the bonds issued on account of the said road, or any part thereof, by the government, under the provisions of this act.

INTERNAL IMPROVEMENTS.

It is estimated that the *Jackson (Mississippi) Sea-coast railroad to Ship island* will cost, if constructed, near $3,000,000, on which the New Orleans Bulletin, remarks:

If the Mississippians would spend $100,000 judiciously, in rendering Pearl river navigable, they would do more for that section of the State than they can by embarking in the proposed railroad enterprise. Then, if they have any surplus to spare let them devote it to the extension, as rapidly as possible, of the Jackson railroad, that is to run through the State from its southern to its northern boundary line, and is, really, of more value than all other roads built, partially built, or in contemplation. The extension of the Vicksburg road eastward of Brandon, in the direction of Montgomery, Alabama, is also important; but not so much so, in our humble opinion, as the building of the central road northwesterly from Canton to Holly Springs.

If Mississippi would only come promptly, energetically, and liberally to the assistance of the Jackson railroad, the cars would be running to Canton in a little over a year. The benefits to our neighbors that would follow such extension can hardly be over-estimated—would be fully as great to them as they would be to us. We certainly have done our part, and, for the present, can do little more. We hope these suggestions and considerations will not be without weight with those who are equally interested with us in the speedy completion of this magnificent improvement.

An extraordinary project has been submitted by the commissioner of the crown lands and eighteen others to the Canadian legislature, and has been printed by order of that body, for *constructing a railway to the Pacific ocean.* The project is embodied in a petition praying for a charter for the "Northern Pacific Railroad Company." The proposed railroad is designed to extend from the city of Montreal by the way of Bytown and the valley of the Ottawa, to the western boundary of Canada, and thence across the St. Mary's river, between Lakes Superior and Huron, at a convenient place, into Michigan, with the further right to enter into engagements with any other railway company or companies in Canada or the United States, for connecting their respective lines in such manner as may be found most advantageous.

The petition refers to the report of Governor Stevens as a proof of the practicability of extending a railroad across the continent of North America, in the valleys of the head waters of the Missouri, and by means of a short tunnel through the mountains at the summit level. The tunnel would be only 5,000 feet above the surface of the sea. The approach to it would be gradual, and grade not exceeding 60 feet per mile, and it is believed that after crossing the Rocky mountain summit, a favorable and direct route might be found to San Francisco.

It is very probable that Congress will now remove the *duty from railroad iron*, which is a matter in which the whole public have a deep interest. A writer says:

During the whole eleven years in which railroad iron was duty free, in every case where a company was unable to lay down its iron within three years from the date of its importation, an application to Congress obtained *special relief*. A reference to the Journal of the House, in three several cases, shows that they were passed *nem. con.* and without even a call for the yeas and nays. I presume the rest were passed the same way; all parties, and all sections of the country acquiescing in the policy. I notice that several of these special acts were for the benefit of Pennsylvania railroads.

INTERNAL IMPROVEMENT—BOARD OF FLORIDA.—The Board recommend a system which, if carried to completion, will connect the extremes of the State with bands of iron, and place Florida, in this respect, on a footing of equality with the most prosperous of the other States of the confederacy. The system recommended consists of a railroad between the waters of Escambia bay and the St. John's river, at Jacksonville, with its extension from suitable points on the line to the waters of St. Andre's bay, in West Florida, and the St. Mark's river in

Middle Florida; and from Amelia Island, on the Atlantic, to the waters of Tampa bay, in South Florida, with an extension to Cedar Key in East Florida; and to connect the country east of the St. John's with the system, and thus to comprehend that section more fully in its benefits. The board recommend also the construction of a canal to connect Indian river with the St. John's.

The following table, says the New York Economist, gives the freights and tolls on the six great avenues, east and west, for the year ending September 30, 1854:

	1853.	1854.	Increase.	Decrease.
Baltimore and Ohio railroad...	$1,460,167	$3,167,445	$1,707,278	.....
New York Central.....	1,831,828	2,480,938	642,110	.....
New York and Erie.....	2,537,214	3,391,598	857,384	.....
Northern.....	392,792	500,000	107,207	.....
Total railroads.....	6,229,003	9,542,991	3,313,988	.....
Pennsylvania canals.....	1,938,754	1,918,696	.....	$20,058
Erie canal.....	2,692,760	2,342,760	.....	350,000
Total canals and roads....	10,860,517	13,804,447	.....	.....

This is a singular result; showing that the railroad freights have largely increased, while the canals have declined. The largest increase is on the part of the Baltimore and Ohio railroad, which opened through to Wheeling in March, 1853. The Pennsylvania works embrace also the railroads; the canal influence is seen, as in the Erie road. The availability of railroads for heavy freight is here established. In the article of flour, for which the capacity of rails, as compared with canals, has been freely sneered at, the Baltimore road brought down this year 752,249 barrels, of which 202,545 barrels went through from Wheeling. That road also brought down 18,776 tons of live stock, including 10,017 head of horned cattle. The coal trade increased from 383,890 tons, 1853, to 463,427 tons this year, yielding a revenue of $1,134,628.

Vicksburg, Shreveport, and Texas Railroad.—We have never, says the Vicksburg Whig, entertained a doubt about the building of this road, from the first organization of the company; and now that there is a concentration which will complete the road in a very short period of time the distance of thirty-eight miles from the river, and thereby enabling the company to reap the benefits of the transportion of the products and trade of North Louisiana, and at the same time transport the supplies, materials, iron, &c., for the road as it progresses, we cannot but entertain the belief that the *whole* road will now be completed in a much shorter period of time than the most sanguine friends have heretofore been justified in anticipating.

Railroad from Shreveport to the Texas line.—The *Marshall* (Texas) *Meridian*, of the 23d ult., says:

"We are informed by Dr. C. G. Young, contractor on the road from Shreveport to the Texas line, and authorized by him to say, that he has concluded a contract with responsible parties to place one hundred hands at work upon the road in January next.

"The Doctor left this morning for Shreveport, and will give the parties the proper authorities and directions for commencing on the first of January, or as soon thereafter as they can get ready.

"The sub-contractors furnishing the hands are from Kentucky, we understand, and came here for a contract on the Texas road."

Mississippi, Ouachita, and Red River Railroad.—We have, says the New Orleans Picayune, received a pamphlet containing the "proceedings of a meeting of the stockholders of the Mississippi, Ouachita, and Red River Railroad Company, held in the city of Camden, Arkansas, on the 22d of November."

The election of directors for the ensuing year was held, and the new board chose John Dockery, president, and James T. Elliott, secretary.

The absence of the president of the road prevented him from making the usual annual report. The reports received and published are those of Lloyd Tilghman, chief engineer, J. T. Elliott, secretary, and P. K. Rounsaville, treasurer. The report of the chief engineer gives a detail of the operations on the several sections of the road during the year, but no summary from which we can learn the exact progress made, the amount required to be done, and the means and prospects for completing it. There is, however, a general statement that with the resources now at the command of the company, and an additional subscription of $500,000 acres of swamp lands by the State, the road can be finished and put into full operation within two years. The subscription to this amount was recommended by the governor in his annual message to the legislature, at the commencement of the present session, and there is every ground to believe that the legislature will concur with the governor, and authorize the subscription. The road is one of the most valuable of these collateral roads, tending to the Mississippi river, and which are feeders of the commerce of New Orleans.

The value of this improvement is greatly enhanced to all this region of country by the recent discovery of bituminous coal of excellent quality, and in almost inexhaustible quantities, in the vicinity of Camden, Arkansas, along the route of this road. Scientific examinations have been lately made, and led to the discovery of a vein six feet four inches thick, which has been traced for seven miles along the Ouachita river. Other veins have been discovered, showing that the bed is very extensive. The kind is described by Mr. Tilghman as the second variety of pit coal, known to geologists as "black coal." No coal of this kind has been heretofore discovered so far south in this vicinity. It has been found further west, in Texas, and northwest beyond the Arkansas frontier, but the value of a vast coal region within easy reach of the Mississippi, at the mouth of the Red river, or at the terminus of this road, is incalculable.

Mr. Shaffner, one of the most enterprising and magnificent projectors of the age, has just returned from Europe, whither he had gone to make arrangements for his *World Girdle Telegraph*. In the whole domain of romance there is nothing to equal this. But who shall deny, judging from the glorious past, that with modern science even the impossible is true?

The route of his proposed line is as follows:

Starting from the coast of Labrador, the width of the sea to Greenland is about five hundred miles. From the point of landing the line is to extend under ground around Cape Farewell to a point on the east coast of Greenland, favorable for a submarine connexion with Iceland. A subterranean line across to the eastern coast of that island will connect with a submarine wire running to the Faroe isles, and thence to Norway, landing at or in the vicinity of Bergen. Mr. Shaffner informs us that the land and climate of Greenland and the isles are well and even better adapted to the construction of the telegraph than those of the United States. Greenland abounds with mineral wealth, and he thinks the telegraph will tend to develop the unappreciated resources of that country. By this route there will be no submarine section of more than five hundred miles, and the loss or failure of one section will not destroy the others. In a line direct from Ireland to Newfoundland the failure of any part occasions a loss of the whole.

After landing on the coast of Norway, it is intended to run the line to Christian, the capital of Norway, and from thence branches to Copenhagen and Stockholm. The Danish government has bound itself to furnish proper connexions with the governments on the continent and Great Britain. Consequently, it will not be necessary to run a cable from the Faroe isles to the Shetlands, Orkneys, and to North Scotland. Treaties with the emperor of Russia contemplate the extension of the line from Stockholm, in Sweden, to St. Petersburg, across or along the coast of Finland. By the construction of this section America will be able to transmit intelligence direct to Russia, and thus establish most intimate relations between the subjects of the Czar and the sovereigns of the United States.

Leaving St. Petersburg, Mr. Shaffner proposes to run his line to Moscow, or connect at the latter place with the imperial lines already in operation. From thence to Kazan, across the Ural mountains, into Asia, passing through Orusk, Kolivan, Kausk, Oudinsk, to Irkoutsk, near Lake Baikal. This is near the great

tea country in Chinese Tartary, from whence the Russian tea is brought overland on wagons. The trade in this tea, which is said to be the best in the world, is very large, and the telegraph, it is supposed, will tend to increase it materially.

From Irkoutsk it is intended to run the line to the sea of Ochotsk, either north to Yokoutsk, or south with the Amour river, and thence along the coast of the sea of Ochotsk to Iamsk, and across the gulf to Cape Utkoloka, Kamtschatka, and thence along the Aluetian isles to Aliaska peninsula, or Cooke's inlet, in North America. From this point the line will be run along the Pacific coast to Oregon, and south to San Francisco, California. This range is entirely south of the latitude of St. Petersburg, and in fact the line can be carried around by the Behring straits, and be south of the arctic circle.

From San Francisco Mr. Shaffner proposes to run the line along the best route to the Salt Lake, and thence to the western boundary of Missouri, where it will intersect the existing section of the California line, built by him a few years ago. Joining the great lines in America, the earth will be girdled with one continuous and unbroken flame of electric light.

New Orleans, Jackson, and Great Northern Railroad.—The following statement shows the earnings for the month of November:

Receipts for passengers, 2,849	$2,533 70
Do for freights, outward and inward	6,909 14
Total	9,442 84
The inward freight consisted of 2,922 bales of cotton	$2,922 00
Miscellaneous freight, outward and inward	3,979 15
Total	6,901 15

This is a most favorable exhibit, and augurs an encouraging and progressive condition. Every mile of road that will be built will be an accessory to the treasury of the company, and when the line penetrates a rich and thickly settled country, as it soon will do, the receipts will be increased fourfold. The friends of this great work have every reason to congratulate themselves at the encouraging prospects ahead.

Memphis and Charleston Railroad.—We are enabled to lay before our readers a few facts on the prospects of this great work, in which our city is so deeply interested in every point of view. The directors of the road have had to struggle through a season of unusual difficulty and depression, and we are truly pleased that they have been able to pass through with comparative success, when almost all southern enterprises of the kind were seriously interrupted. The stringency of the money market and the difficulty of cashing even good securities without a heavy discount have borne peculiarly hard on roads in progress for the last six months, and nearly all have been forced to suspend operations.

Of the Memphis and Charleston road one hundred and eight miles are in operation, and eighty-three miles in addition completely graded, which connect Decatur with Stephenson, Alabama.

The bridge at Decatur is near completion, and only awaits a favorable stage of water in the Tennessee river to procure the timber and iron needed. The track laying will then commence at each end of this section, and be carried on as speedily as possible, when there will be a continuous road of one hundred and twenty-seven miles, connecting Charleston, via the Nashville and Chattanooga road, with the rich and populous basin of the Tennessee as far westward as Tuscumbia.

The Nashville and Chattanooga company have also twenty-five miles ready for the iron, which will soon be laid eastward from La Grange, to which point the track is completed. There will then be completed on the western division seventy-five miles, and on the eastern one hundred and twenty-seven miles on the main trunk, exclusive of a branch of thirteen miles, all of which will be in operation in time for the next season. The iron necessary for this extent has been purchased, and much of it delivered. A small amount of first-rate securities will be negotiated to meet the cost of freight and duties, but the company are provided

with means for all other demands. After this there will only be a gap of seventy miles in the centre, which will be filled up as fast as can be done safely and certainly under the existing state of the money market.

The bridge over the Tennessee river at Muscle Shoals will be two thousand feet long. There are thirteen piers of immense and heavy masonry, which have been completed on a solid rock foundation. The wood-work is going on, and the work will be ready to receive iron in January.

We may, therefore, reasonably expect that by the first of October, 1855, we shall have a direct railroad connexion with Tuscumbia.—*Charleston Courier, 6th.*

THE RAILWAYS OF THE UNITED STATES.

The Merchants' Magazine contains an elaborate article in relation to the railways of the United States, as well as of the world. From it, we learn that the number of miles of railway now in operation upon the surface of the globe is 40,344. Of these, 17,020 are in the eastern, and 23,324 are in the western hemisphere. They are distributed as follows: In Great Britain, 7,774 miles; in Germany, 5,340 miles; in France, 2,480 miles; in Belgium, 532 miles; in Russia, 422 miles; In Italy, 170 miles; in Sweden, 75 miles; in Norway 42 miles; in Spain, 60 miles; in Africa, 25 miles; in India, 109 miles; in the United States, 21,528 miles; in the British Provinces, 1,327 miles; in the Island of Cuba, 359 miles; in Panama, 50 miles; in South America, 60 miles.

The longest railway in the world is the Illinois Central, which, with its branches, is 731 miles in length, and has been constructed at a cost of $15,000,000. The number of miles of railway in the United States exceeds the rest of the world by the amount of 2,712 miles.

States.	No. of railways.	Miles in operation.	Miles in course of construction.	Cost.
Maine	12	456	50	$15,325,656
New Hampshire	16	512	34	15,860,940
Vermont	7	410	59	17,698,835
Massachusetts	39	1,293	36	59,167,781
Rhode Island	1	50	..	2,614,484
Connecticut	12	638	51	25,224,191
New York	32	2,664	801	110,908,469
New Jersey	11	437	..	13,840,030
Pennsylvania	69	1,992	1,406	85,935,675
Delaware	2	16	43	600,000
Maryland	2	512	30	2,654,338
Virginia	24	845	1,104	16,666,250
North Carolina	5	381	243	6,847,213
South Carolina	10	692	382	13,447,093
Georgia	16	930	452	16,884,872
Florida	2	54	...	250,000
Alabama	6	221	659	3,986,208
Mississippi	7	239	755	4,540,000
Louisiana	8	169	293	1,731,000
Texas	1	...	72	.....
Tennessee	12	517	946	10,436,610
Kentucky	10	228	572	6,179,072
Missouri	6	50	963	1,000,000
Ohio	47	2,997	1,631	67,798,201
Indiana	39	1,453	2,608	30,255,362
Illinois	31	2,767	1,456	57,663,656
Michigan	3	568	150	20,070,397
Wisconsin	11	322	707	6,500,000
Iowa	4	115	1,235	2,700,000
Total	445	21,528	16,738	616,766,333

Journal of Education.

INDUSTRIAL SCHOOLS.

Schools in the United States, upon the principle of combined mental and physical training, are less frequent now than they were a few years ago. Many of the experiments we know to have been failures. It was our own fortune to attend an institution conducted upon this plan in the interior of South Carolina. The professors were able, their zeal unflagging, the earlier encouragement great, but soon began the war between the mental and the physical, in which the former triumphed and the latter disappeared from the boards. It has not subsequently been heard of. To conduct the plough, to wield the axe, to follow the ox-cart, to bank the potato beds, were not congenial to the feelings of youth who were beginning to have aspirations in philosophy. The laziest laborers were the best students and the greatest wits, and *vice versa*. All work and no play were making Jack a dull boy. Still we are not willing to judge the question of manual labor schools upon the merits of a particular experiment. There is much to be said in their favor. There is a basis upon which they would be successful, and they are perhaps well adapted to many of the rural districts. In this opinion we give a paper prepared by Mr. Symons, one of the inspectors of schools in Great Britain. In other places, agricultural schools proper are referred to.

In speaking of "industrial schools," I need scarcely premise that I refer almost entirely to the education of the children of the laboring classes—a subject which, though long discussed, I am sure you will agree with me events are daily pressing more urgently on our attention, and which is second to none in social importance. The subject of industrial instruction united with schools is comparatively of recent origin; and I cannot but attribute the increasing notice it obtains, first, to the desire that education should be so good and popular as to be self-supporting; and, secondly, to the hope entertained by many, that industrial instruction may prove a means to this end, by adapting the education given, more closely than is now done, to the practical wants and labor-life of the classes to be educated. Whether rightly or wrongly I have not sufficient evidence to determine, but sure it is that a very widely-spread notion prevails—entertained by various ranks of persons—that the present education given in common schools is not sufficiently of this character; and that a thorough comprehension of elementary and suitable learning is often sacrificed to scholastic subtleties and high subjects, apprehended by a few only, and of practical usefulness to none of the scholars. And I must confess, that whenever I find scholars well-grounded in such religious and secular knowledge as cannot fail to be of use in the homely duties and daily labors of life, and more especially when I find the school so organized that what they thus learn can be practically applied, I am very tolerant of the absence of all knowledge of technical theology or high art, and am no wise dismayed if I find the children know nothing of the chronology of the kings of Israel,

are ignorant of the tributaries of the Euphrates, and never heard of Agamemnon. It is, in my humble judgment, a far graver blot when they are unable to give the practical moral of a parable, to describe the productions and topography of their own country, to explain intelligibly any one of the common arts of life, the qualities of metals or the uses of timber trees, or to exercise the powers of mental calculation. Unless this be done, and well done, and unless this and much more of the same kind of knowledge be diligently imparted—as far as the age, stay at school, and capacities of the children permit—not merely to the few clever and forward children who figure in the first class, but fairly among the whole number, a school certainly does not fulfil the requirements of the working classes, or satisfy even the lowest standard of instruction desired by those who are most concerned for their welfare. And, assuredly, none such have the least chance of being self-supporting

But in whatever degree schools are rendered practically efficient for the purposes of education, in the full meaning of that term, sure it is that to that extent are they likely to pay their way. The poor are, in some measure, good judges in this matter, for they in general look closely to the value of what they pay for. True it is that they have hitherto held school instruction at no very high estimate, nor is it certain that they have erred much in so doing.

Dean Dawes, and many worthy coadjutors, have done much to meet the evil, by showing how *in*-door school instruction may be improved; but I have for long thought that there remains another branch of the work to be achieved ere education shall be complete. The human animal is physical as well as mental and moral, and so intimately does all philosophy and all experience show that these elements of man are *blended*, that the education of no one of them can be safely neglected. If it be, the work is incomplete; for the cultivation of any one alone suffers from the disjunction.

I am disposed to believe that more real good is done for a child by the joint training of *all* his faculties, even in a low measure, than by the highest intellectual instruction exclusive of physical and moral training. It was the great bane of the old school system, that it did thus disproportionately instruct the mind; I speak even of the best schools. Not a word need be wasted on those mechanical mockeries of education which merely encumber the memory and neglect the understanding, teaching nothing effectually but the mechanism of writing, reading, ciphering, and religion by rote. But the

question still remains, whether the great majority of schools are good enough to satisfy the ordinary requirements of the times, and *sufficiently educate the child*, however fully they may *accomplish the intellect*.

Is it possible to give even a fair start to the moral or physical development of a being so full of animal life and propensities as a child, whilst cabined in a school-room, harnessed to its routine, and constrained by its discipline? The real nature of a child has no free scope within the four walls of a school-room, and its very virtues there are chiefly negative and conventional. Its vices have small means of display, and consequently small chance of correction. I am far from disposed to underrate the mental benefits achieved, but can the best qualities of the *heart—love, generosity, mercy, forgiveness, moral indignation at the meaner vices*, courage or truthfulness be brought fairly into play? But set those same children to work out of doors, or even turn them into a play-ground, and their nature comes out, and with it ample scope for moral training, the suppression of what is mean and vicious, and the encouragement of what is generous and good. Mr. Stow, of Glasgow, has written well and wisely on the indispensability of this right hand of the educator. He insists, however, as I think rather too exclusively, on the *play*-ground; and has left to industrial schools the privilege of developing the greater efficacy of the *work*-ground, especially in those branches best adapted to schools for the laboring classes.

Before entering more at large on the direct effect of industrial training on industrial life, permit me to touch on the indirect furtherance which I think it gives to practical instruction in the school-room, and especially to that branch of it lately very happily termed the "Science of Common Things." I believe that if there be—as there always ought to be in these branches of study—an intelligent adaptation of the subjects taught within, to the work done *without*, and that the scholar is made to perceive the application of what he *learns* to the work that he *does*, there will necessarily arise in his mind a life-like appreciation of the practical value of knowledge, which will materially aid its acquisition. It makes his lessons a reality, of which he apprehends the meaning and feels the use, instead of an abstract jargon, which, being unable to apply it, and having little hold on his senses, he learns without benefit and forgets without loss.

I venture to think, from the experience of the schools of this kind in the best workhouses in my district, that the teacher is also proportionably aided by this experimental instruction

which labor imparts to mind, and which undoubtedly mind reciprocates to labor. I have found that it greatly facilitates the teaching as well as learning of practical science, and if more generally adopted, would, I am sure, remove many of those defects in tuition such as caused Mr. Moseley to say, in his last report, that "The tendency from ignorance of *things* to teach children *words* only runs in a notable manner through almost all the lessons on physical science which I have listened to. It will not be eradicated, (he adds,) so far as the teaching of popular science is concerned, until the study of physical science shall be more systematically pursued in training schools, *or until it shall have received a special application to those things surrounding the daily life of a child, the science of which is within the limits of its comprehension;*" and I would add, more especially, such things as lie within the range of his actual work.

Most true is it, as Mr. Moseley afterwards says, that "labor, without thought or contrivance, for no object, to which our endeavors are directed, and which we adapt to no end, is irksome to us."

The reverse of this proposition is almost equally true, for irksome indeed is the acquirement of knowledge which a child is not taught to apply to any practical purpose. Mr. Moseley continues: "To develop this character of the *makers* in the child, as contrasted with the *workers*, is the function of physical science in elementary education. It is to lay the foundations of intelligence, enterprise, activity, and industry in the common affairs of life, and of all those elements of a man's social and moral well being which stand in intimate relation to these." I regret, however, to find that so high an authority holds this to be "industrial education *under its only reasonable form*." And Mr. Moseley adds that actual industry for children presents to his mind visions only of "monotonous occupation, strained nerves and sinews, stagnant impressions, hatred of labor, and premature discomforts forbidden by nature!"

I entertain so great a respect for the opinion of Mr. Moseley that I should feel considerable diffidence in expressing the strong opinion I have been induced to form, in favor of rational and appropriate bodily labor for children at an early age, were I not relieved by a foot-note on the same page of his report, which points to the fact that Mr. Mosely had chiefly the trades of *shoemaking* and *tailoring* in view when he wrote these remarks, trades which, I have no difficulty in believing, that the Greenwich school-boys very sensibly abandon for

better and more lucrative employment in after-life. If, however, Mr. Moseley, or any of my hearers, will follow my example this morning, and pay a visit to the farm-school at Highgate, and see the boys at work at their various occupations on the land there, all such forebodings will be rapidly dispelled by the unmistakable evidences of high animal spirits, cheerfulness, the healthful and strengthening nature of spade husbandry, and the intelligent interest in, as well as the instructional and suggestive character of, the work done. There is no answer to any such misgivings half so complete as that of one's own personal observation. I have seen too many inert, flaccid, feeble, children in workhouses converted under my own eyes, by such means, into hardy, healthy, handy little laborers, to entertain any doubt of the immense benefit of muscular exertion and useful work alike on the physical and moral nature of a child. One of the first lessons I strive to teach my own children, both by precept and practice, is the value and dignity of labor, and the full use of their hands as well as their heads; and I do not scruple to recommend systematic bodily industry as a concomitant of education for children of the higher ranks. Athletic games and manly exercises, in some cases and in some measure, achieve this object, but by no means universally or sufficiently. It is worth notice that though men who unite ornamental accomplishments with bodily inactivity are numerous, few men have ever excelled in the nobler aims and great energies of life who have not evinced physical training and bodily vigor.

To children who are to earn their bread by the sweat of their brow, it is almost impossible to exaggerate the importance of associating manual with mental labor, at an early period; and this cannot be done if habits of bodily industry are postponed to a later period. The spirit of the laborer cannot be imparted without labor. I do not believe that Solomon's golden maxim, "to train up a child in the way he should go," was intended to be applied only to morals and minds, but to all the great duties and behests of life—physical as well as mental. Habitual industry in childhood would have prevented three-fourths of the idleness, dependence, disease, and pauperism, of which a grievous amount still exists, and rankles like a canker among the poorer classes of this busy country.

Allow me now to dwell for a moment on the direct influence of judicious bodily industry in the development of mental power. It is the all but universal testimony of the teachers and inspectors of those schools which have adopted out-door industry, especially in spade husbandry, that the boys so em-

ployed learn far more readily than they formerly did; and that although their time is shorter in school, they learn more quickly whilst there. It is equally so with respect to moral habits.

The more fully habits of neatness, intelligence, patience, and industry grow under the discipline in the ground, so surely are the same qualities apparent in the school. "The best workers in the ground," says Mr. Adams,* "become the best learners in the school; and if a boy has a slovenly, ill-cultivated plot in the land, he is sure to be a slovenly, idle fellow in the school, until he is reformed."

And I must here mention an important illustration brought to my notice of the assistance which out-door industry gives to the fruition and exercise of kindly sympathies between boys. I allude to the mutual assistance it involves. In the ground, the boys not only work together, but they help each other. The whole system instils a practical habit of mutual aid and co-operation. In the school-room it is exactly the reverse. The help given by one boy to another, which is a duty in the labor-ground, is an offence in the school-room, for there each must work by and for himself. I was told that when any emergency occurs in the cultivation of the ground at the Highgate school, it is common for the boys who have left the establishment to come and volunteer a half day's work to help the others, although they have no longer a prospect of reward for it; and the other day, when some visitors from the exhibition were expected at the school, and the little boys could not get their plots so neat as they wished, the elder ones, of their own accord, turned to and helped them. I need not dwell on the genial and fruitful effect which a work tending to such results, simple as they are, must necessarily exercise in removing selfishness, and fostering those feelings of brotherly love and benevolence one towards another, which are the highest practical tests of christianity.

Mr. Watkins says, in one of his reports, speaking of the few experiments yet made in the West Riding: "I believe it is hardly possible to overrate either the *moral* or the *economical* value of school-fields and gardens in manufacturing, quite as much as in agricultural districts of our country." He sums up the advantages thus: "The willingness of the children to work; the healthy effect produced on their work in school by their work in the garden, *shown by their standing in the school and conduct in it.* To these," he well says, "may be added,

* Master of the Highgate National School.

the practical knowledge acquired by these young gardeners of a subject which will be useful and interesting to them in whatever situation of life they may be placed, the cultivation and refinement of their tastes by more observant acquaintance with the wonderful and beautiful works of nature; and above all, the habit of healthy industry and cheerful occupation of time which will, by God's blessing, save them from many a temptation, and support them in many a trial of their after-life."

There is much practical truth in this. The physical concomitants of a child's existence greatly determine his moral character and status hereafter, as well as in childhood.

Having now touched on the general principles whereon industrial schools are advocated, it may be permitted me to say something of the details of the system.

The kind of labor taught must always be judiciously adapted to the kind of employment most suitable and accessible to the scholars in their locality, as an introduction to the business of after-life. Thus, the employment must greatly depend on the circumstances of each case.

Of course, in towns, resort must be had to the more useful trades, on which I will say a word or two presently; but as the great majority of schools for the poor are either in or near the country, in a large majority of cases, nothing excels spade husbandry for boys, with the care of pigs, and wherever possible, of cows, chiefly stall-fed, the land being cropped and manured accordingly. Household and needle-work are excellent occupations for girls, but to these should be added washing and ironing, and—where it can be done—cooking.

Let me, however, at once disclaim the error that by such industrial training as it is alone possible to give school-children, it is pretended that we can make them perfect gardeners, husbandmen, cattle-keepers, dairy-women, or domestic servants; but it is affirmed that they will acquire an aptitude for useful labor and habits of manual industry, which are not, and cannot be acquired in school-rooms. It is also (I beg to repeat) a most important fact, that they who stay long enough are thus serving an apprenticeship, whilst at school, in those after-pursuits and modes of livelihood which they must eventually learn; but which they must defer in ordinary schools till they quit them.

It is, indeed, advanced against the junction of industry with school instruction, that the parents of working-class children will take care that they shall be put to work quite soon enough to learn it properly; and that it is a pity to withdraw any of

the short time now allotted to them for the education of their minds.

To this position there is the short, and it seems to me sufficient answer, that the parents put their children to work often far too early, and that they are now compelled to take them wholly from school in order to do so: whereas it is the great virtue of industrial schools that by *the early adoption of productive labor along with school instruction*, they are induced to allow their children to remain there longer than they otherwise would.

Under the purely mental school system, one of two evils seems inevitably to arise from the necessities of the poor: either instruction is unduly shortened, or labor is injuriously deferred.

Why are poor parents so anxious to remove a child of eleven or twelve years of age from ordinary schools just at that very period when his faculties are expanding, and it is of the most vital benefit to him to continue his education? It is in order that this very apprenticeship to labor may begin, which the industrial school gives, but which the ordinary school prevents. There is something more than theory to back the assertion that industrial schools will retain children longer than others, and therefore afford one of the best remedies to that shortness of the stay of poor children in school, which militates so fatally against adequate instruction in every part of this busy nation. Let me name some examples.

In the Hagley school, Lord Lyttelton has adopted spade-husbandry and carpentering as collateral pursuits. The school fee is threepence per week, and the average duration of the stay was three years, during the last few years; and the number of children in the school in April, 1853, above twelve years old, was thirty-one out of 119. At Hereford there is a Blue Coat school (most efficiently taught) which, in July last, contained exactly the same number of boys. There is no industrial training: *the instruction is wholly gratuitous.* The average duration of the stay is two years, nine months and a half for the last three or four years; and the number of boys above twelve years old was, in July last, only ten out of 119—the same number as at Hagley.

At the Llanelly school, attached to the copper works (not industrial, but also an exceedingly good one) the average stay, including those now in the school, is one year and eight months, the average school-fee being only three-halfpence per week. The census of education, grossly erroneous as it is, shows

truly enough, that two years is about the average duration of schooling which poor children receive.

If the ordinary schools for the poor were similarly tested, it would be found that the average duration of the stay of the children is still less than this in busy towns.

In the Hagley school, there is no other inducement to the parents to let the children remain a longer time than its greater usefulness to them. This is the true secret of the matter. Here, in spite of double the cost, the parents make the sacrifice for double the time, because, and only because, it is worth their while to do so. Render the schools equally worth the sacrifice elsewhere, and the parents will as readily make it everywhere. The children are to fill certain stations, and perform certain labor. They require to be fitted for both. Education must do this, or it fails in doing what it is designed for; or, at best, does it partially. It is found that industrial schools effect this the best. Hagley is not a perfect model of this kind of school, but it illustrates the ease with which the industrial system may be carried out, and the great benefit which even an imperfect application of it is capable of effecting. The school is pleasantly situated in the village, and is under the charge of a very efficient teacher. Apart from the carpenter's shop, patches of ninety-eight square yards of ground are allotted to the boys (eleven years of age) who deserve them most, and are likely to stay at the school. They cultivate them entirely themselves, the master merely giving hints. They pay no rent for the ground, and have manure gratis. They buy their own seeds, and *have all the produce*. This is essentially requisite to the success of the system. There are cases in which the school-master receives the profit for his trouble; others where it goes to the school-fund. None of these answer. The parents will not let their children give that labor for nothing, which they can themselves turn into money. It leads to the failure of the scheme, inevitably. But when to the faculty for industry are added its fruits, be they ever so small, there is a charm in the plan which wins ready suffrages from the parents.

At Highgate this fact has been well evidenced: the *boys* obtain small plots of land, of about three poles, at a rental of two shillings yearly: these they cultivate out of school-hours at their own expense, receiving superintendence and sometimes seeds from the master. In addition to this they give at least one hour's labour to *his* land, and for extra time they receive one penny per hour. The parents are well satisfied with this advantage, small as it seems.

The *day* girls, who are *not boarded* with *the others*, are required to assist in the household work taught to the boarders, and if not paid for it, they usually object, and their mothers interfere and find out that they cannot dispense with their assistance at home. I never knew it otherwise; and I should be sorry if it were. It is due to the parent, and due to the children, that in all dealings with them there should be the earliest homage done to the great principle—that "the laborer is worthy of his hire."

In the country there is not much choice of handicrafts but that of the carpenter. It can be pursued in wet weather, is cleanly, exercises the muscles, and teaches handiness perhaps better than any other of the laboring arts.

Mr. Norreys speaks in the highest terms, in his last report, of the success of the industrial schools he has promoted in his district, and especially of the experiment made in a few places, to let the boys divide their time between work for the neighbouring farmers and school instruction. It appears to answer admirably; and Mr. Norreys adds these, among other important results:—"The longer period of schooling which by this compromise the parents, farmers, and guardians are induced to consent to, more than compensates for the loss of a few hours of each day. The alternation of field-work with school lessons, gives zest to the latter."

It is well to cite evidence also from the schoolmasters. Take the letter of Mr. Joseph Radclyffe, of Upper Slaithwaite, Yorkshire, as an illustration in Mr. Watkins's report (p. 497):—"I have been highly gratified in my vocation as cultivator of the school field-garden; the children have willingly gone to work whenever they have been called upon, looking so full of energy that they have had the appearance of men when seen laboring in the distance. Beyond a question, it would do well for schoolmasters and school-children generally, had they each and all plots of ground for their own recreation and profit." In this one-acre ground, Mr. Radclyffe reports a produce exceeding the outlay by 6*l.* 6*s.* 8*d.*

The successful establishment of industrial schools in towns is more difficult than in the country, inasmuch as spade husbandry is rarely practicable there. All that can be done for the boys must be by means of workshops, as in the free industrial school at Birmingham, where they nearly clothe themselves, and are consequently made tailors and shoemakers. In many cases I think that bookbinding, and, in sea-port towns, net-making may be advantageously taught. Carpenters' shops

may always be added beneficially. As regards the industrial training of girls, the matter is much easier.

The great point is to discourage all kinds of frippery and fancy work. It is utterly unsuitable for nineteen-twentieths of the class who are taught in our common schools, and who cannot all be ladies' maids. It runs side by side with some of the extravagances in mental instruction to which I ventured to allude before, as regards the teaching of boys, and tends, especially in the girls, to feed vanity, and utterly unfit them for being domestic servants. In sympathising, as I most heartily do, with the strong outcry now raised on this subject, I am confident that I am consulting the real comfort and feelings of the children themselves, who frequently suffer most bitterly in after-life from the puppyisms of education to which they have been thus subjected. I may be forgiven, perhaps, for introducing a trivial anecdote here to illustrate this. A girl in Devonshire was sent to a national school, in which she had been taught her parts of speech after a fashion, but certainly not how to boil potatoes, or any single qualification for the service into which she shortly afterwards entered. She was found to be as useless as might be expected, but her mortification was perhaps quite as great to find that her flimsy attainments were the cause of additional annoyance to her. As a specimen, she was asked by one of the young ladies in the house how she liked the master at her school, who occasionally stuttered? She replied that she liked him very well, except that he was not *affluent*. This caused a laugh, and the next morning she remarked that she perceived she had used a strong expression, and having looked at the dictionary, found she ought to have said *exuberant*.

It is impossible to believe that the foolish things taught to poor girls could long co-exist with a good drilling in scrubbing, scouring, and cooking. This would soon take the nonsense out of school instruction, and education would no longer have the unjust odium of putting peacock's feathers on the daw's back, and spoiling her for what nature designed her. Milliner's and ladies' maids require another order of instruction, but they will always constitute a very small fraction of the whole number of working-class girls.

The shorter period that the child is kept in school, when he is industrially trained part of the day, is a great improvement on the old system, and is of great benefit to his mental acquirements. There is no worse mistake than the number of hours which a child is usually kept over books. It destroys the spring of intellectual vigor, and infallibly deadens his ap-

petite for knowledge, even where it does not render its acquirement permanently distasteful to him.

The theory of industrial schools is by no means a new one, either here or abroad, though Holland, Belgium, Switzerland, and some parts of Germany had much the priority to us in applying it in practice; and they are now giving it considerable extension, as Monsier Ducpetiaux has shown in his elaborate report on farm schools to the Belgian government, rendered familiar to most of us by the late Mr. Fletcher's excellent synopsis of that report.

In England I believe the earliest systematic adoption of farm schools was in the benevolent experiment of Mrs. Davies Gilbert, who, in or about 1842, allotted five acres each to two school-masters in Surrey. Their plan was to instruct about twenty-five boys each, during the whole morning, in elementary knowledge, who paid one penny per week, only on condition that they assisted their master in cultivating the land in the afternoon. The low school-fee seems to have been the only recompense for their labor; nevertheless it answered completely. A very useful little hand-book has been published entitled, "Field Gardening,"* which gives a journal of the operations in these pieces of ground during a whole year, and the work accomplished is certainly very great.

The impulse to the more recent experiments of industrial schools was given chiefly by the reports of the Union school inspectors in the minutes of the committee of council, and who have especially applied their powers to the encouragement of this kind of education as being, in their judgment, essential to the counteraction of the pauper habit of mind and body. The results appear to have been entirely in accordance with the views I have had the honor of stating to you. The profits of the system (as tried in workhouses) are considerable in amount, though secondary in principle—the sole object being reformation and the creation of habits of industry. In the reports printed in the minutes of council, several accounts and balance sheets of these farm gardens are given. As a useful proof how little school managers need fear the expense of such additions to their establishments, I may cite the following instances of the actual expenses and receipts in some of the west of England unions:

* Published by Simpkin and Marshall, 1846.

Union.	Acres. Cultivated.	Boys employed.	Total Outlay.	Total Income.	Profit per Acre.
Atcham.....	2 0 0	14	36 16 0	86 10 2	24 17 1
Church Stretton.....	2 0 0	4 and 2 men	17 3 0	43 9 8	13 3 4
Haverfordwest.....	2 0 0	12	3 13 3	21 2 8	8 14 8
Northleach.....	1 0 0	7	23 13 0	33 14 6	10 1 6
Oswestry.....	3 0 30	11	26 8 11	69 1 2	14 4 0
S. E. Salop District (Quat.).....	11 1 0	24 and 1 man	168 5 11½	328 6 8	14 10 0
St. Asaph.....	1 1 0	19	2 4 1	20 8 8¾	14 11 8
Wellington, Salop.....	6 2 0	20	41 17 5½	87 9 8½	7 0 4

The great discrepancy between the sums expended results from the very different modes of cropping the land, and especially of stocking it. The largest profits seem to have arisen where cows and pigs are kept, and where grain crops are *not* grown. In each case spade husbandry has been exclusively used. The expenses include rent, tithes, and rates. Labor is, of course, not included, as it is not paid for; it is that of the boys, who would otherwise be idle.

I must not omit to name briefly one of the great virtues of industrial training in its power in reforming criminal children, This is admirably illustrated at Parkhurst, where the industrial system is more fully carried out than at any other place I have visited, and with great benefit.

The Philanthropic Farm School at Redhill is specially reported on by Mr. Tuffnell, and the moral advantages of the system and its reformatory effect are highly spoken of. "The school teachers," he says, "are all industrial and moral rather than intellectual superintendents; and their time is chiefly engaged, not in giving literary information, but in managing the tempers, reforming the habits, and generally regulating the dispositions and behaviour of those who are placed under them—in other words their duty is to impart education in its highest sense; and on this dependence is, as it appears to me, very properly placed for attaining the object of the society—the reformation of juvenile offenders."

The unvarnished and convincing report recently published by Mr. Barwick Baker, of Hardwick Court, near Gloucester,

on his reformatory school on his own estate, is already made fully known to the public through the *Times* newspaper. It is not only important, as showing how successful is this kind of discipline for the reformation of the most hardened and least hopeless boys, but it also shows how well the work may be done at a comparatively trifling cost—the total expenditure amounting only to £11 per head. That such seventeen boys should have so completely cultivated five acres of stiff clay land, that more will be required to keep them employed, is a great achievement in spade husbandry, and proves how thoroughly spade husbandry, boy labor, and reformation suit each other. Another instance is afforded by the success of the Gloucester Ragged School, which pays £25 rent for seven acres, and yields a profit of £35 towards the working boys' dinners.

I cannot admit that the system I recommend, of a devotion of part of the day to industrial instead of school teaching, is the least hardship to the teacher. It is, where too much is not laid upon him, a welcome and healthy relief to the unwholesome monotony and confinement of school work. As regards gardening, I advise schoolmasters to take a hint from the students of Kneller Hall, which is turning out some masters who, I believe, are second in attainments to no in-door teacher in London, and who think it no degradation or grievance to take off their coats and work hard at the spade with their pupils, as they are trained to do in that excellent institution.

In conclusion, permit me to remind you that we have fallen on intensely practical times, in which utility is daily becoming more and more the measure of value. Our social fabric is undergoing great change. Year by year less is thought of the beauty of the acanthus, or the symmetry of the volute, and more and more of the solidity of the base, and the adaptation of the column to the edifice it supports. In like manner will education be valued, by the precise degree in which it fits the masses of our children for their obvious destiny in industrial England.

The practical conclusions in which the experience of the past results seem to be these:

To render an industrial school useful and prosperous—

1. The employment must be adapted to the probable future occupations of the children. This for boys will generally be spade husbandry, and the care of pigs or cows, or both; for girls, needle-work, household work, plain cooking, and, where practicable, washing, ironing, and dairy work.

2. The children or their parents must, as an indispensable

condition, have some share of the profits of their labor either in food, clothing, or money.

3. The system must consist of *instructional* industry, not of of mere labor.

4. It should be so superintended and tempered as to render it a means of practical moral training.

Under these conditions, I have sanguine hopes not only that experiments made will individually answer, but that gradually, that hearty, earnest and practical character will be given to education, which the country loudly and justly demands for its people at the hands of their educators.

AMERICAN EDUCATION ASSOCIATION.

For the following sketch of the proceedings of this association, which met in Washington at the close of December last, we are indebted to the columns of the Globe. Other particulars of its action will appear hereafter. We hope to see the body represent all of the States of the Union in its healthful and beneficent purposes.

The American Association for the Advancement of Education, which has held a series of conferences during the past week, is composed of teachers, and the friends of education, who meet annually to consult how best to promote the great work in which they are engaged. Individual observations during the year, at these *reunions*, are communicated to the whole, and they return to their spheres of usefulness imbued with accumulated intelligence, a deeper devotion to their vocation, and a quickened spirit which, while it stimulates to new exertions, enhances the happiness of those who make them. Education imparts an ineffable blessedness to the community by which it is promoted, and to the individual who is taught. The individual owes to it gratitude for new sources of intellectual enjoyment and worldly advantage, and the world that it rescues from obscurity minds that add brilliancy to the world's constellations, fits the rising generation for stations of domestic, commercial, and public usefulness, and diminishes the positive evil which pervades an ill-taught or uneducated people. Such associations as that by which we have been visited cannot but excite a deep interest, for there is a moral grandeur in the culture of the universal mind.

In their discussions comprehensive views were taken of the progress of education on the continent of Europe. Professor H. Barnard, LL. D., superintendent of public schools in Connecticut, gave an account of his visit to the educational exhibition held at London during the Industrial Exhibition of all Nations, and of that assemblage some idea may be formed

from the fact that St. Martin's Hall, one of the largest building of the kind, was fully occupied. It is five stories high, and all the rooms were crowded with contributions of documents on education, models, maps, globes, &c., or used as lecture rooms where scientific men read papers on various subjects, or consulted as to plans. The number can be imagined from the fact that the catalogue of the articles exhibited there is a book of nine hundred pages. To that, however, while Norway, Switzerland, Sweden, and Holland contributed largely, the United States did but little. The State of New York sent some four hundred specimens of globes, maps, and drawings, but no other State was signalized at that exhibition, whatever may be its progress in the work of education at home.

It is apparent that on both continents there is an active spirit infusing itself into the public mind. In the eastern and western States of this Union much has been accomplished.—The common school system of New England has long met with general commendation. New York has been munificent in her contributions to education. Pennsylvania has an organized system through every county, and, in addition, a high school in Philadelphia which is not exceeded in any country. Illinois and the western States are moving onward, and Chicago is about to emulate Philadelphia, by the erection of a high school.

The common school system in Philadelphia, and its high school, are such enduring monuments to the generous minds of that community, that they are deserving of more particular notice. The principal of the high school, John S. Hart, LL. D., Professor of English and Anglo-Saxon literature, was present at this association, and delivered several addresses, one on Indo-European languages, their history and affinities, and one on the architecture of school houses, more particularly the Philadelphia high school, of which he exhibited drawings made by the pupils.

The high school, which is well entitled to a collegiate designation, is reached only through the common schools, and hence it is a goal which the boys struggle to reach by a diligence in study which fixes the character in after life. The gradations are the primary, and secondary, and grammar schools, which are controlled by boards of citizens elected by the people, who furnish the means for their sustenance. The schools are free, and the superiority of their character and the education furnished in the high school commands the respect of all classes, and the sons of the wealthy there receive their instruction with the sons of those who have no wealth. This

intermingling is a republican feature, which has incalculable advantages. Upwards of fifty thousand pupils attend the schools daily, and as the cost, chargeable to their education in the first district, comprising the city and county of Philadelphia, amounts to $350,000 per annum, generous as is the provision made, the cost for each pupil barely exceeds $7 per annum. An additional sum of nearly $17,000 is expended for the support of night schools, for the benefit of those of more advanced years, who cannot avail themselves of the common daily schools.

The attendance on the night schools during the winter of 1852 and 1853, was males 5,776, females 1,966, total, 7,772, the cost for each being less than $2 50. There are a normal school, and school of practice, with an attendance of upwards of 500, which cost nearly $6,000 per annum, or less than $11 for each pupil. The expenses of the high school, in which there are now about 600 pupils, average $33 for each pupil, or less than $20,000. The high school commenced its career in 1838, with only 63 students and four professors, and with a character not much beyond that now attained by the best grammar schools; but it has gradually enlarged its corps of professors, its number of students, and its course of studies, until it has assumed in public estimation the rank, as from the legislature of the commonwealth it has received, the distinctive attributes of a college. Its professorships are English and Anglo-Saxon literature; practical mathematics; theoretical mathematics and astronomy; anatomy, physiology, and natural history; belles lettres, and history; French, Spanish, German, Latin, and Greek languages; natural philosophy and chemistry; civil engineering, drawing, writing, and book-keeping; with assistants in moral, mental, and political science; belles lettres and history; and mathematics and extra English.

Thirteen is the minimum age for admission to the high school, and then only on an examination of attainments in the common school, to which boys are admitted at the age of six years. The course of education in the high school extends through a period of four years, and the graduates are admitted, without further preparation, to the study of law, medicine, and divinity. In many other professions and pursuits they honor, and do honor to their *alma mater*. Such is the education which Philadelphia gives freely to her sons before she sends them forth to engage in business pursuits. Political economy, mental science, moral science, astronomy, analytical geometry, algebra, navigation, surveying, trigonometry, anatomy and physiology, elocution, logic, rhetoric, geometry, natural

philosophy, chemistry, civil engineering, drawing, writing, phonography, book-keeping, French, Latin, and German, are taught without charge to the poorest, as to the rich, for no distinctions exist. The son of the laborer has the means of developing his faculties and obtaining an education which will place him on an elevation with the highest. Of such a system Philadelphians may well be proud, for they have outstripped competition, and given advantages to all their youth which wealth alone could once obtain, and to which too many thought it hopeless to aspire.

More recently they have erected a new structure for the purposes of the high school, which is surmounted by an observatory. Professor Hart, in his address, minutely described its details, and the plan by which it is heated and ventilated. Its interior arrangements are exceedingly convenient and comfortable, and a visit to the class-rooms during the hours of instruction is attended with unwonted pleasure. The moral discipline of the pupils is not dependent on austerity in the professor; there they are taught to use their intellectual faculties, they are accustomed to think, and they are stimulated by an elevated perception of their duties as intelligent beings. In Professor Hart, the principal, and all the professors, there is a marked suavity of manner, which wins the pupil onward in his educational progress. A personal knowledge prompts this commendation of an institution which may be held up as a model to other communities without invidious comparison with any. The alumni of this institution, in various vocations, are benefitting other States with the knowledge which it has imparted; and the cause of education may be promoted, and the republic improved, if a generous rivalry can be stimulated in other large cities and communities. The objects of the association, which has now adjourned, will command a large share of the public respect.

During the week there were discussions and papers read on the teaching of the classics in schools, and other topics connected with education; and Professor Henry, the retiring president, read a paper on the philosophy of education. The next annual meeting was fixed for the last Tuesday in August, and the following gentlemen were elected to fill the designated offices:

President, Hon. Henry Barnard, of Connecticut; recording secretary, R. S. Cooke, esq., of New Jersey; corresponding secretary, P. Pemberton Morris, Philadelphia; treasurer, John Whitehead, esq., New Jersey.

Amongst the gentlemen from other places who participated

in the business of the convention, were Bishop Potter, of Pennsylvania; Professor Proudfit, of Rutger's college; Hon. H. Barnard, of Connecticut; Professor J. S. Hart, of Pennsylvania; Professor Dimitry, of Louisiana; Professors Greenleaf, of Brooklyn, New York; R. L. Cooke, John Whitehead, S. M. Hamill, D. Cole, of New Jersey; Dr. R. L. Stanton, now of this city; William P. Ross, of the Cherokee nation; Solomon Jenner, and Dr. Lambert, of New York.

SYSTEM OF COMMON SCHOOLS IN NEW YORK.

Among the subjects (says the governor) which will require your attention there is none of more importance than the system of public education of the State. The magnitude of this interest has always been felt and appreciated by the people, and the State has shown, from the earliest period of its existence, an earnest desire to provide the means for the adequate instruction of all the children within its limits. For a long time the system pursued was based on the assumption that education was mainly a matter of personal interest, and that the duty of providing it devolved exclusively upon parents; the instruction of the children of those whose poverty would not permit them to incur the expense of it themselves being made to depend upon public charity. The inefficiency of this policy, its failure to accomplish the object aimed at, and especially its direct tendency to create distinctions hostile to the spirit and character of our institutions, led to its abandonment, and a system based upon the principle that the State is even more deeply and permanently interested in the education of its children than their parents, and that the expense of providing it should be borne by the aggregate of the property within its limits, was adopted in its stead. Under the existing law, therefore, the State assumes the charge of public education—committing its direction to local officers and paying the cost of it out of its own treasury. The system is comparatively new, and some practical defects are as yet exhibited in its workings; but they are such as spring chiefly from the failure to give full and complete development to its fundamental principles, and may easily be remedied by judicious legislation. The system itself is believed to be thoroughly rooted in the confidence and favor of the people.

The whole amount of money apportioned by the superintendent of public instruction is $1,055,000, of which $800,000 was raised by a general tax, and $255,000 from the income of the common school and United States deposite funds. The whole amount expended for public schools is $2,666,609 36, of which $1,929,884 49 was applied to the payment of teachers, and $47,657 06 for the district libraries. The whole number of district schools reported for the year is 11,798; and the whole number of children in the State of the age required to draw public money, 1,186,709 There have been 877,201 in attendance upon the district schools; in academies under the supervision of the regents of the university, 37,406; 34,279 in unincorporated private schools, and 4,568 in colored schools. The average number of months during which the schools have been kept in the several districts is eight. The number of volumes in the district libraries is 1,571,270.

These results exhibit a gratifying increase in the number attending the district schools over the previous year. But it will still be seen that of the whole number of children of suitable age in the State there are 309,508, or nearly one-fourth of the whole number, who do not attend the district schools, and 233,255, or about twenty per cent. of the whole number, who do not attend any school. In view of the provision that has been made for the express purpose of securing the education of all, this proportion is much too large, and indicates some defect in the system pursued—because it does not completely attain the object at which it aims. That it does not, may be partly due to the mode of distributing the public funds. By the existing law, two-thirds of the public funds are distributed among the various districts of the State in proportion to the whole number of children of a specified age within their limits, whether they attend the schools or not. If the

apportionment of the public money were made to depend upon the number attending school and upon the regularity of their attendance, it would become the interest of the citizens generally to promote the regular attendance of all the children within their limits. An amendment of the law which would give it this direction would, I believe, tend to secure more fully the desired result. The law is defective, also, in that it fails to carry out fully and completely the principle on which it is based. Education in the district schools is not yet entirely free. If the cost of the schools in any district exceeds the amount of money received from the State, the deficiency is made up by a rate bill, assessed upon those who send their children to school; and those who are unable to pay this assessment are relieved at the public expense, and thus become the recipients of public charity. The worst element of the old system is thus preserved, and the fundamental principle of the new law fails of its application in its most essential point. Education is still regarded as a matter of charity, and not of right; and so long as this continues to be the case, in any degree or to any extent, it will detract from the full measure of usefulness which the system is designed to secure. This evil in the system can be remedied only by making the schools entirely free.

The attention of the legislature should also be directed to measures for improving the character of the schools, for increasing their efficiency, and for elevating and extending the instruction which they impart. In a State where every citizen should take an active interest in the administration of public affairs, and may be called upon to perform the highest duties of public life, it is important that popular education be carried to the highest point which the means of the State will allow. It has been objected to the system of free schools, that people do not prize that which cost them nothing, and that relieving individuals from the expense of educating their children will diminish their interest in the subject and lead them to relax the vigilance which is essential to the highest excellence in the public schools. There is, undoubtedly, some force in the suggestion, though experience shows that it is much less than is sometimes supposed. But whether it be more or less, it is entitled to consideration, and provision should be made for obviating the objection in any system of education which the State may adopt. An obvious mode of doing this is by means of an active and intelligent supervision, by which the schools shall be regularly visited, and their discipline examined by competent officers selected for that purpose. Various attempts have been made to supply this, but none of them have hitherto proved entirely successful. The agency provided by the present law is that of town superintendents; but it is found more expensive, and less efficient than is desirable, and gives rise to local dissensions, injurious to the successful working of the general system. Similar objections led to the abandonment of the system of county superintendents, a few years since. Unless the principle of visitation can be more effectually reconciled with public sentiment, and made more economical and effective than it has been hitherto, the end which it is designed to secure must be sought by other means.

The connexion of our common schools with the higher institutions of learning—with academies and colleges—making them all, in fact, parts of one great system, could not fail to contribute essentially to their elevation, and bring the means of a thorough and complete education within the reach of all. In the city of New York, where the free school system of the State has been, perhaps, more completely developed than in any other section, the benefits of substantially such a union are very conspicuous. A free academy has been added to the system, in which a large and competent corps of professors and tutors has been provided, a plan of study extending over five years, and embracing all the branches of study pursued in the best colleges of the country has been adopted; scientific apparatus, libraries, and all the aids requisite for study have been furnished, and the general discipline and course of instruction have been made, in all respects of the highest and most efficient character. Pupils who shall have attended any of the district schools for eighteen months—maintained throughout a good standing and character, and passed a satisfactory examination in certain specified studies, are admitted to the academy and entitled to the full enjoyment of its advantages, free of all expense. The academy has been in operation only three or four years, and the average number of its students is over four hundred. The attendance shows that its benefits are fully appreciated. But besides the thorough and most useful instruction conferred upon so large a number of the children and youth of the community, its most marked advantages are seen in

the influence which it exerts upon the common schools—stimulating their teachers, trustees, inspectors and pupils alike to a generous rivalry, increasing their vigilance and industry, and rendering them zealous and emulous in sending the best pupils to the academy, whose facilities for education are the prize for which all may alike contend. While I am aware that large cities afford facilities for such a system which cannot be fully enjoyed in the rural districts, I think that something may be done throughout the State in this direction. A voluntary beginning, indeed, has already been made in some sections, by the establishment of union schools; and their success shows that the system is not wholly impracticable. I think that the time has come when higher purposes and broader views may be entertained in regard to our system of State education; and that our academies may be brought into a more direct and immediate connexion with the general plan, and thrown more widely and more freely open to the advantages they are intended to confer. The character of their instruction should be elevated and its range extended; and they should be more completely furnished with apparatus and the means of imparting knowledge in those sciences which are of the most service in practical life. By making free admission to the thorough and complete education they would then afford the reward of excellence in our district schools, a stimulus would be furnished which could not fail to be felt beneficially upon their discipline and character. It would be highly desirable to bring the colleges of the State into harmonious connexion with such a plan, so that they might become more directly recognised as members of our general system of State education, and as essential to its completeness and perfection.

Education in Missouri.—Governor Price, in his message to the legislature of Missouri, gives a very encouraging account of the condition of education in that State. The University prospers under its present organization; the Deaf and Dumb and the Lunatic Asylums have been judiciously and humanely conducted; and the Institution for the Blind has been eminently successful. We were agreeably surprised to learn that one-fourth of the general revenues of the State is set apart for the support of schools, but the governor states that it is unequally distributed. He recommends a special school tax as more satisfactory, and as tending to enhance the solicitude of the people in the cause of education.

Schools in Boston.—By the official report of the Grammar School Committee, we learn that the number of children who were taught in the Grammar Schools in July, last year, was 10,204; boys 5,177; girls 5,057. The average attendance during six months was 9,722, or 95 per cent. The number of seats in the schools is 11,327, so that the city has accommodations for more than a thousand more children. These ten thousand children are taught by 26 masters, 14 sub-masters, 14 ushers, and 165 female assistants. These statistics include only the Latin, High and Normal Schools, and the nineteen Grammar Schools. There are about two hundred public primary schools in the city besides, which have nearly eleven thousand children in them, under the charge of some one hundred and ninety-four female teachers.

Summary of Teachers' Report presented at the meeting of the Board of Trustees of the Public Schools of Washington, D. C.

Number of reports received, 36; number of pupils on the rolls, 2,039; entered, 74; suspended, 7; withdrawn, 113; transferred, 12; corporeally punished, 84; waiting admission, 109, of whom 79 are in the third district; present every school day, 648; aggregate average attendance, 1,444. In the first district one day was lost by the absence of a teacher; in the second, 11 days; in the third, 4½ days. The best attendance was by the pupils in Miss Parsons' school, the aggregate of attendance being 120; of absence, 20; in the first district the attendance was 949; absence, 59; in the third, attendance, 776; absence, 212; and in the fourth, attendance, 784; absence, 160.

EDUCATION IN SOUTH CAROLINA.

Upon this subject the governor, in his last annual message, remarks:

The South Carolina College, upon which you have bestowed so much fostering care and beneficence, continues to deserve your favor and protection. Under the auspices of its present able and distinguished head, it has been steadily increasing in popularity and usefulness. The laborious efforts, both of his predecessor and himself, to elevate the standard of character and scholarship, have been attended by signal success; and the reputation of the institution in this regard has been both exalted and extended. In common with all who have the best interest of the State at heart, I earnestly hope that he may long continue to discharge the functions of high office. Talents and qualifications such as his belong to no party or sect. They are the property of the State which they have benefitted and adorned by their exercise; and she looks forward with confidence to his continued supervision of an institution which was intended to be, and is, the nursery of her character, genius, and scholarship.

During the past year the college has been benefitted by two noble endowments, and, in after years, many a youth, ardent in his search after knowledge and in the pursuit of fame, will pour from his heart blessings upon the names of Allston and Hutchinson.

A half century has expired since the establishment of the college, and, after the various fortunes and vicissitudes of life, the alumni are about to assemble to renew their reverence for their Alma Mater, and, for a brief period, to freshen the memories of early years. For a day at least, all of her children are to assemble under the maternal roof; and whilst she embraces and blesses her living sons, she will also weave wreaths of *immortelles* for those who died in their early prime. The scene will be one full of interest, and, I hope, of usefulness; and I recommend you to take such steps as will give increased effect and dignity to the occasion.

Each year convinces us of the wisdom which dictated the establishment of the arsenal and citadel academies. They have afforded a practical education to the youth who have been placed there, the effects of which are more sensibly felt each day throughout the State. Their knowledge of tactics acquired during the academic term, is plainly perceptible in improvement in the drill of a large portion of the militia; and their attainments in engineering and surveying is fast supplying, and will soon supply altogether, the demand for that kind of knowledge in the State. I have no hesitation in expressing the opinion that more benefit has arisen from the few thousand dollars expended annually upon these schools for ten years past, than has accrued to the State from the application of the free school appropriations for thirty years previous.

I cannot omit to bring to your notice the efficient, laborious, and disinterested services of the chairman of the board of visitors. Nothing can be more prompt, uniform, and systematic than his administration of affairs; and as long as he continues in his present position, I feel sure that increased success will attend his efforts. I commend these academies to your especial care and liberality.

The question of reform in the free school system has largely engaged the attention of the people during the past year. It has everywhere been discussed, and the conviction is generally established that radical changes are necessary in our present plan of public instruction.

In my last annual message I expressed the opinion that it would be premature to adopt, at that time, any plan that might be submitted for your approval, to reconstruct the system, but advised the appointment of a minister of public instruction, and subsequently a board, to act in concert with him, by whose united labors a plan complete and adequate can be digested for your ultimate adoption. I cannot give the reasons for this recommendation in a manner stronger or more forcible than by using the language of one whose ability all acknowledge.

"All, therefore, that I would now press upon you is, to have public instruction erected into a department of the State government. That is the first and an indispensable step; and until that is done, there never can be plan adequate, consistent, successful.

"What we first need is a collection of the facts from which the data of a proper system may be drawn. We must know the number of children in the State, of the ages of which children are usually sent to school, the kind and degree of education demanded, the relative distances of the residence of parents, the points

at which school houses may be most conveniently erected, the number of buildings required, the number of teachers, and the salaries which different localities make necessary to competent support. Facts of this sort must constitute the groundwork. In possession of these we may then proceed to compare different systems, adopting from among them that which seems to be best adapted to our own circumstances, or originating a new one, if all should prove unsatisfactory. All, therefore, that in my judgment the legislature should undertake at present, is to acquire this preliminary information, including the accumulation of facts, the comparison of different common school systems, and the digest of a plan suited to the wants of our own people. This can be done by the appointment of a minister of public instruction, who shall be regarded as an officer of the government, compensated by a large salary, and who shall give himself unreservedly to this great interest. Let him be required to traverse the State, to inspect the condition of every neighborhood, and from personal observation and authentic testimony let him become acquainted with the number, the extent and the circumstances of the children. Let him be prepared to say where school houses can be most conveniently erected, the distances at which they should be removed from each other, the kind of teacher needed in each neighborhood, and let him indicate what sections of the State are unprepared for schools in consequence of the dispersion of their inhabitants. Let him be able to give some probable estimate of the expense incident to the successful operation of an adequate scheme. In the next place, it should be his duty to master the existing systems, whether in this country or Europe, and to lay before the legislature a succinct account of their fundamental provisions. Let him propose the scheme which he thinks ought to be adopted here, and let his report be referred to an able and learned commission, charged with the final preparation of such a scheme as we may be ready to enact into law."

The expense of carrying into effect the foregoing suggestion should be defrayed out of a reserved per centage upon the present free school appropriation; thus saving additional drafts of money from the treasury, and making the free school fund correct ultimately the abuses and defects of the present system.

PRIMARY EDUCATION IN GERMANY.

Professor Barnard states the cardinal principles of the German system to be—

First. The recognition on the part of the government of the right, duty, and interest of every community, not only to co-operate with parents in the education of children, but to provide, as far as practicable, by efficient inducement and penalties, against the neglect of this first of parental obligations, in a single instance. The school obligation—the duty of parents to send their children to school, or provide for their instruction at home—was enforced by law in Saxe-Gotha, in 1643; in Saxony and Wirtemberg, in 1659; in Hildesheim, in 1663; in Calemberg, in 1681; in Celle, in 1689; in Prussia, in 1717; and in every State of Germany before the beginning of the present century. But it is only within the last thirty years that government enactments have been made truly efficient by enlisting the habits and good will of the people on the side of duty. We must look to the generation of men now coming into active life for the fruits of this principle, universally recognized, and in most cases wisely enforced in every State, large and small, Catholic and Protestant, and having more or less of constitutional guaranties and forms.

Second. The establishment of a sufficient number of permanent schools of different grades, according to the population, in every neighborhood, with a suitable outfit of buildings, furniture, appendages and apparatus.

Third. The specific preparation of teachers, as far as practicable, for the particular grade of schools for which they are destined, with opportunities for professional employment and promotion through life.

Fourth. Provision on the part of the government to make the schools accessible to the poorest, not, except in comparatively a few instances, and those in the most despotic governments, by making them free to the poor, but cheap to all.

Fifth. A system of inspection, variously organized, but constant, general, and responsible—reaching every locality, every school, every teacher, and pervading the whole State from the central government to the remotest district.

EDUCATION IN ARKANSAS.

Governor Conway, in his last annual message, 1854, thus refers to this subject:

It is a source of pleasure to witness the fact that good schools for educating the rising generation have been and are being established, by individual enterprise, in almost every section of the State. True, many of them have been incorporated; but not one of these has derived any pecuniary aid from the State. Notwithstanding this, many prosperous seminaries and colleges are sustained, in different sections of the State, by the private patronage of an enlightened public. The Arkansas College, at Fayetteville, is one of these incorporated institutions, and seems to have succeeded in establishing a wide-spread reputation as a good institution, conducted by a president and professors of ability and learning, which facts have caused it to be well patronized by our citizens, and drawn to it many male students from other States. Honorable mention might be made of other institutions of learning in the State; and if we had the means, the State should contribute "by allowing rewards and immunities" to all of them, so as to "encourage intellectual, scientific, and agricultural improvement," and aid in inculcating "the principles of humanity, industry, and morality," and also in "the promotion of arts, science, commerce, manufactories, and natural history."

These are objects worthy of consideration. "The opportunities and advantages of education" should be diffused "through the various parts of the State," so that the rising generation may be benefitted by the inculcation of the "principles of humanity, industry, and morality," and by the acquisition of knowledge and learning be prepared for the preservation of a free government.

We have a common school law, intended as a system of establishing common schools in all parts of the State; but for the want of adequate means, there are very few in operation under this law. In view of the great importance of the subject, and to enable the people, in counties in which there are no public schools, to establish such, and have them, as far as the means will allow, free for the children of all, I recommend for your consideration the propriety of authorizing, by law, the county court of any county in the State, which may chose to do so, to appropriate, annually, the poll-tax for the benefit of education, in the way indicated.

TO OUR SUBSCRIBERS.

The friends of the Review will perceive in what manner we have kept our promises in enlarging the work fully one-third, and in improving it in every other respect. These improvements will now go on regularly, and no effort will be spared to make the Review one of the best in the country—interesting and valuable to every class of readers. An experience of nine years has enabled the Editor to acquire facilities possessed by few, if any others; and his whole energies will be devoted again to the editorial and business of the work.

The first necessity of such a journal is MONEY. May we not, therefore, earnestly entreat remittances from all who are at all in arrears for the past *or for the current year*. The bills have not yet been made out; but every subscriber can know of himself the extent of his indebtedness, if any, and will remit a part, if not the whole. He will be sure of being credited for his remittance, whether more or less, upon the cover of the work, and of having, if desired, a special statement in return. Throughout nine years no subscriber has lost one cent by such a course. Prompt payments are indispensable in a work which requires a cash outlay of nearly one thousand dollars a month. Remittances may be made in bills of any good banks, or checks on local banks, or orders upon merchants in the cities and towns, payable out of sales of crops.

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☞ Subscribers who require any numbers of the Review to complete their sets for the last two or three years will be supplied *without expense* on application. The earlier numbers and sets of the several series can be had on reasonable terms. An entirely new series commences January, 1855, the cloth covers for which, semi-annually, handsomely lettered, will be furnished, postpaid, for 50 cents each. They can be put on in any village.

Remit, if convenient, to Washington; if more convenient, to New Orleans.